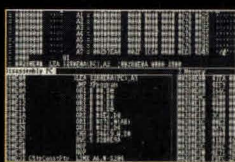


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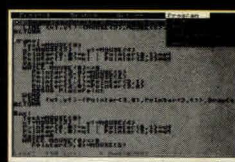


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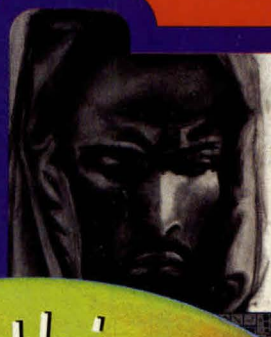


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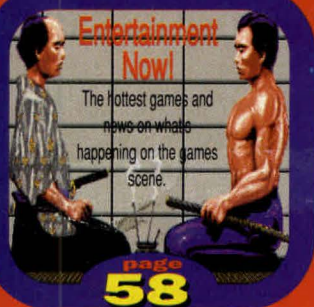
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INTERNATIONAL
VOLUME 6 No. 5 MAY 1992

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44 **Polishing the Image...** Perry Kivolowitz, Boss of ASDG, the creators of the astonishing Art Department Professional, gives an exclusive interview to Mike Nelson in which he reveals a new project that could stir up the whole Amiga world.

48 **The Soft Alternative** Alternative Image, the people who gave the Amiga The Big Alternative Scroller tell Anthony Mael what is like to use the Amiga in videomaking and how they have developed some hot new graphics software.

99 **Both sides of the pond**, Oxxi, who may have been better known for the companies they keep than the products they create, have brought out what may be one of the most significant pieces of Amiga software yet. Gary Bonham, the man who produced IT reveals to Mike Nelson how it happened.

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91 Subscribe to AUI and your favourite reading will come dropping through your letterbox. The easy way to a breakfast table read!

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102 **TurboPrint** John Walker finds that the U.K. version of this exceptional German program really does lift the standard of dot matrix printing way up to the laser level.

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107 **Hispeed Pascal** This impressive package from HiSoft is a very useful addition to the languages of the Amiga. Andy Eskelson tests it out.

120 **HP Deskjet** The classic among the jetsetters of the printing world...Gary Fenton judges its qualities.

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26 Daphne Moss is glued between the covers - well figuratively speaking - of two books that take you from what we all fear, a Virus in the airline business, to the hardware used on the big Arnie-style Primal Screen.

PRODUCTS USED TO CREATE THIS MONTH'S AUI: CDTV, Amiga 3000, Arnor's Protexx, Cygnus Ed, Canon's RC-260 Still Video Camera, DATEL's Action Display cartridge, CCS's Deluxe Paint III and IV, GVP's Series II FastROM Hard Disk Controller Card fitted with Quantum 11ms Hard Drive, HiSoft's Devpac, Innovatronics CanDo, Microsystem's Scribble Hard Disk Drive Controller Card, Nordic's Power Cartridge, Oxxi's SpectraColor, Preci-William's PictureWare, JVC GR-S505 Camcorder, GST Gold SP, Professional Page

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This month we tell you more about what's going down in the world of Amiga graphics from the professional videomakers to how you can do it yourself.

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5 The Amiga Dimension Managing Editor Antony Jacobson considers that a time machine can take the form of a car but the shape of things to come may well be that of a shiny disk.

8 Coverdisk Find out how to make the most of this month's AUI Superdisk. Blue Ribbon Soundworks's Toador Fay talks you through using this month's exclusive SuperJAM! Demo, and Gary Fenton gives you a quick start guide to the other, as usual excellent, AUI coverdisk utilities.

12 Newsfile So what's been happening on the computer scene in Britain and around the world? Catch up with the latest news and ideas in the formidable AUI Newsfile.

128 Amiga Answers Andy Eskelson braves his way through your tricky technical questions and gives some sound advice over his dedicated pages. If you have a problem and no one else can help, then we know a man who can.....Andy!

136 Amiga Letters If you have a point to make, a bone to pick, or even a commendation to offer, then you certainly have a Write To Reply. Bud Vennos fields the brickbats and the bouquets.

138 The Fat Lady Sings You thought you knew what was going on? Well, the Fat Lady has to sing before it's all over and this month she's on top of the music with an exclusive report on a game that will make your hair stand on end and then probably drop out! If you're the nervous type stay away from the last page...

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32 WIN a set of extraordinary prints of a classic Mustang - the car that is not the horse - courtesy of Amiga artist Rico Gusman.

88 WIN what everyone is talking about - a CDTV! Plus the Top Ten titles on Commodore's MultiMedia player. The competition? Easy as falling off a log...

The Amiga Dimension

The Shape of Things to Come says the cover of our CDTV supplement. The phrase doesn't only refer to our new design style, which we hope you will like, but to the compact disc on which CDTV software is stored. But it also alludes to the book by H.G.Wells in which he made some interesting predictions about the future. Wells, author of The War of the Worlds, The Invisible Man, and The Time Machine, was one of the most influential figures in forming this century's view of what the future might bring. He wasn't always right but he opened up the minds of people in the early part of the 20th century to a fictional but scientifically convincing picture of the possibilities offered by our world and others. That SF picture, of course, included computers of which The Time Machine was an interesting example. It later appeared wittily updated as a gullwinged DeLorean sports car in "Back to the Future". While time machines may take the form of cars, for most of us, the shape of things to come, in a much nearer future, will be circular, disk-shaped. Not square like floppies, which aren't really floppy, but compactly rounded to fit interactive machines like CDTVs. Make no mistake, the coming of CDTV heralds the end of the home computer as we know it. For though interactive media of this kind are just beginning, they are designed to construct the simple electronic bridge into everyday life that the computer, except with enthusiasts like ourselves, has failed to create. For most people are not interested in technology only in its results. CDTVs and their like are easy to use. They can provide, quite cheaply, a huge and accessible bank of information and activities. They will not be consigned to boys' bedrooms and merely used to play electronic games. That will be the role of the consoles and their successors. Interactive MultiMedia will become an active addition to, even substitute for, passive TV. In spite, or maybe because, of his gift for predicting the future, in his last book, "Mind at the End of Its Tether", H.G.Wells clearly showed his depression at the prospect of what lay ahead. And seeing the way humanity has behaved this century, who can say he was wrong? Still, it's a pity he never saw CDTV. I think the potential the medium holds for turning couch potatoes into interactive doers might well have cheered him up a little. Whether our new design style cheers you - or depresses you - let me know. We will be glad to hear what you think of the Shape of Things to Come in AUI.

Antony Jacobson

Managing Editor

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SuperJam! No.

This month we've
squeezed the fantastic
SuperJAM! Demo and six
excellent utilities onto
the coverdisk. Please
read through these
pages before loading the
Superdisk and you will
be told how to use each
program to its full
potential.

Are you in a Jam?

Amigas with less than 1.5 megabytes of RAM will not be able to play TurboSamples to their full potential. The more RAM you have, the better the music will sound. Anyone lucky enough to have an accelerator card will hear TurboSamples at their best. SuperJAM! really stands out from the crowd if you have a MIDI sound source, such as a tone/module bank or a multitimbral keyboard with built-in sounds. If you do have a MIDI setup then SuperJAM! will work fine on a 1Mb Amiga.

The Super

The SuperJAM! Demo is a full-featured version of SuperJAM!, lacking only the ability to save. Because the release version of SuperJAM! is distributed on three disks, the demo version does not include many of the Styles and TurboSounds included with the product. However, it includes everything you need to explore the program and create your own music. You can even create and save your own direct-to-disk digital audio performances, called TurboSamples.

Running the Demo

Use this demo to test all the SuperJAM! features, as well as view a self-running demonstration of the program. We highly recommend that you run the self-running demo first, then explore on your own. However, because it creates a TurboSample in RAM, the self-running demo requires at least 1.5 megabytes of memory to run. If you don't have the extra memory, you can still explore the program on your own and even create a TurboSample on disk. For complete instructions on executing the self-running demo, please read the Instructions file included with it. To get the demo up and running you need to read the section marked Attention! If you have no more than 1Mb of RAM you may encounter a

few problems using the demo due to the lack of memory. To free up some precious memory, go to the Prefs menu after SuperJAM! has loaded. From there, you can select the Memory Saver functions, such as Close Workbench and Use Gray Scale. These settings can be saved to disk. Please be patient when you are loading SuperJAM! as it may take a minute or more to load and initialise.

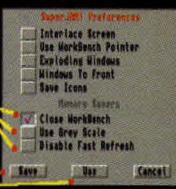
Creating Music in SuperJAM!

Think of SuperJAM! as your own assemblage of trained musicians who know how to interpret your every whim in as musical a manner as possible. You provide the framework, and they turn it into music. For example, you might say, "Play me something in a Funk style in the key of C minor, and chose your chords by listening to the notes I play with one finger." They start to perform, and you like what you hear but it's too low to sing along with. You suggest, "Raise the pitch,

Saving memory: Go to the Prefs menu.

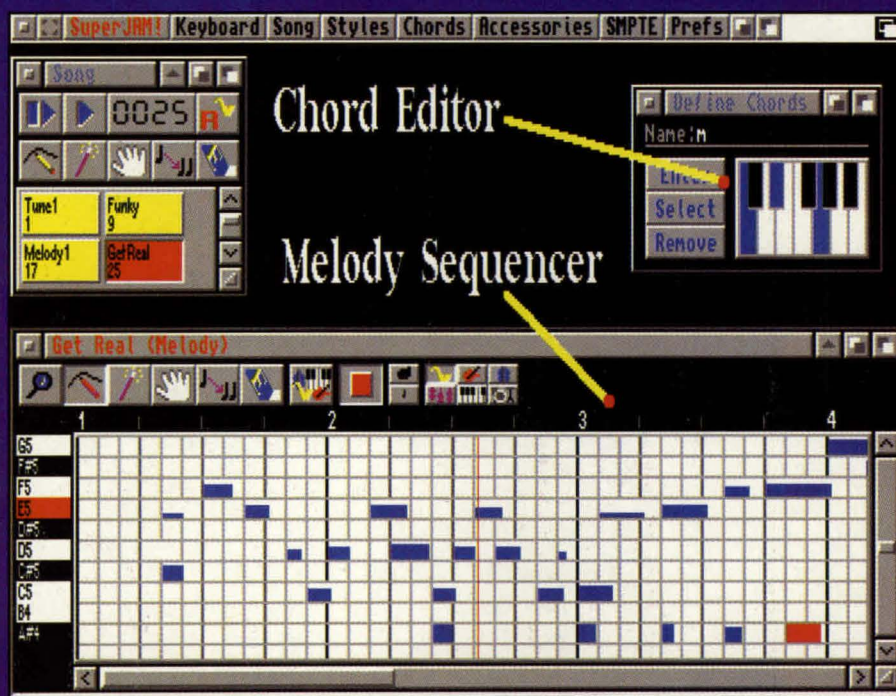
Select one or all of the memory saving options.

Then, choose Save or Use.



audi Disk 12

SuperJAM! Demo



and, while you're at it, slow the tempo down a bit." They follow obediently. As they play, you continue to try different chords, even change to a different style: "come to think of it, this really should be reggae," and they follow along never losing patience. And, as with human performers, the music your SuperJAM! band composes is dynamic and alive. It doesn't have a mechanical feel, unlike most computer generated music, and it's never the same twice. But that's not all. You can set the volume of each player, change which instruments they play, even add musical embellishments like breaks and fills.

Using the SuperJAM! Keyboard

When SuperJAM! first runs, it displays the Keyboard window. From the Keyboard window you can dive directly into interactive music composition with the SuperJAM! band. Click on the piano keys to select chords. Notice that each key has the type of chord written on it. For example, a major chord is

denoted with an uppercase 'M', while a minor chord is a lower case 'm'. Change the key pitch by clicking on the yellow up and down arrows, or change the key from major to minor by clicking on the happy face. Notice that as you do this, the chord labels on the piano keys

ATTENTION!

The May Superdisk has been compressed because we have packed two whole disks onto just one coverdisk! Uncompressing the disk is extremely easy and requires no typing or complicated procedures. Firstly, you must make two copies of this month's Superdisk. Please refer to your Amiga manuals if you are unsure how to make a copy of a disk. Whatever you do, don't use your original Superdisk because the computer will alter the information on the disk for good. Always work with a copy.

After you have made two copies of this month's Superdisk, you need to rename them. Rename one disk to SJAM and the other to Utils3. Just to confirm that, one disk must be called "SJAM" and the other "Utils3". Don't worry about upper and lower case letters, and don't type in the quotes! Now that you have made two copies of the disk, one called SJAM and the other called Utils3. (Yes, I know I have repeated myself several times but I am just making sure you have done exactly what's written on this page!) Right, next you must decide which you want to uncompress first. You can do either the SuperJAM! Demo disk or the utilities disk. Please read the relevant section about uncompressing either of the disks. Of course, when you have uncompressed one disk you can do the other one! Please note that if your Amiga crashes while attending to the disk, you may have to go back and copy the disk again. **SuperJAM!: To make your SuperJAM! Demo disk, you have to reset your Amiga and boot from the disk you have called SJAM. Make sure the disk is write enabled. When Workbench has loaded, double click on the SJAM icon. The computer will then load up a special program which will create the SuperJAM! disk for you. Just sit back patiently and follow the computer's prompts. After a while the computer will tell you it has finished. All you do then is reset the computer with the disk still in df0. Have fun with SuperJAM! Utilities: To make your utilities disk, you must reset your Amiga and boot from the disk you have renamed to Utils3. When Workbench**

has loaded, double click on the Utils icon. Again, make sure the disk is write enabled. The computer will load a small program and then start to uncompress the disk for you. Sit back and follow any instructions the computer gives you. It shouldn't take any longer than five minutes to create the utility disk. When it has finished, you can boot from the disk and enjoy many useful programs. Have fun.



the Utilities



bBasell

This is version 5.3 of Robert Bromley's brilliant database program. Unlike most conventional databases, bBasell is extremely user friendly and quite colourful too. It can be run from the Workbench by double clicking on its icon. To give you an

idea of what bBasell can do, try loading the example database file called recipes.bbase. You can use the cursor keys to move from one record to another or use the Search function. Full instructions for bBasell are on the coverdisk which can be printed out or read on-screen.

PicBase

Computer artists have always been plagued with difficulty when it comes to finding a particular picture on disk somewhere. This useful and rather clever program can help everyone, regardless if you have a hard disk or not. PicBase builds up a collection of pictures and stores their details and a small replica of the original image. When you need to find a certain picture in your collection, you can either browse leisurely through your gallery or perform an automatic search. PicBase is only 30K in size, yet it can do so much. For example, double clicking on a image in your library will cause PicBase to tell you which disk to insert and then it will load up the full size picture. Teaching PicBase about your picture collection involves clicking on the Load button and then selecting your pictures or a directory via a requester. Complete

instructions can be found on the coverdisk.

Power Packer Patcher (PP)

Many Amiga users have a shareware or commercial program called PowerPacker. (Versions from 3.0a onwards are a commercial product, not PD). PowerPacker reduces a file in size, taking up less disk space. Data files that were compressed using PowerPacker can not be loaded into the corresponding programs. This means that a PowerPacker-ed IFF picture file will not load into DPaint, and so on. PowerPacker Patcher is a small program that runs in the background and keeps a close eye on what you are doing. If you should try and load a crunched picture into DPaint, PP will de-

crunch the file automatically before passing it on to DPaint. Similarly, crunched sound samples can be loaded into your favourite sampling editor, and other crunched data files can be loaded successfully into their

parent programs. Can't life be wonderful? However, life is not a complete bed of roses because when you save the data file, after loading it in, it will be saved in an uncompressed form. Nothing a trip into PowerPacker can't cure, though. Thanks to Michael Berg for PowerPacker Patcher.

PrFront

If you have got a printer and a lot of fonts, you need PrFont. This simple to use program does a good job of looking through your font directory and printing a sample of text from each font. You will end up with a printed library of fonts, on

change. SuperJAM! reassigns the chords to fit properly within the key. This is just one example of how SuperJAM! uses its knowledge of music to help you compose. Of course, you can always override it. Select any chord from the table of chords on the right and drag it onto any piano key to install it. Click on the buttons running down the left side to select a style. Click on the Play button (the blue triangle) to perform. As SuperJAM! performs, you may vary the tempo (purple arrows),

style, chords, and add a fill by clicking on the paint can.

About TurboSound Instruments

By default, this demo performs its music with TurboSound instruments. Depending on the power of your Amiga, up to 16 TurboSounds can be played at the same time. However, if you are running a stock Amiga 500, 1500, or 2000 without an accelerator, not enough notes can play at the same

time. As a result, SuperJAM! clips notes short. In addition, SuperJAM! plays the notes at a low sample rate, reducing the sound quality. Don't be disappointed, you have several options. The best is to use MIDI. SuperJAM! really comes into its own when run with MIDI sound modules. However, if you don't have MIDI or an accelerator, you can still create a TurboSample at a higher sample rate and with plenty of voices. More on TurboSamples later.

Selecting Instruments and Using MIDI

To switch to MIDI, or otherwise control the SuperJAM! band's instruments, open the Band window by clicking on the Band button (the button just to the left of the Section button.) Use this window to configure each of the six band members, Drums, Bass, Piano, Guitar, Strings, and Lead. Each player is represented by an appropriate instrument icon on the left side of the

window. To the right of each instrument is a speaker button. This indicates that the player is performing with the Amiga's internal sounds using the TurboSound software. The next button displays the name of the selected TurboSound instrument. You may select a different instrument by clicking down on the name and choosing from the pop-up menu. The up and down arrows shift the notes up or down an octave. Finally, the slider controls the volume. Keeping with SuperJAM!'s interactive philosophy, you may change these controls as the music plays. To load and edit your TurboSound instrument, click on the instrument icon. This opens the TurboSound editor, a full featured sample editor. You can switch a player to MIDI by clicking on the speaker button in the Band window. It becomes a MIDI button. Notice that the TurboSound instrument name is replaced by two buttons - the MIDI patch number and MIDI channel. Remember, you must have a MIDI interface hooked up to your Amiga to use this. Click on the patch number and drag it

with the mouse. Notice how the instrument changes. You may also change the MIDI channel by clicking on the channel number and selecting a different channel from the pop-up menu. You can also load presets for specific MIDI instruments.



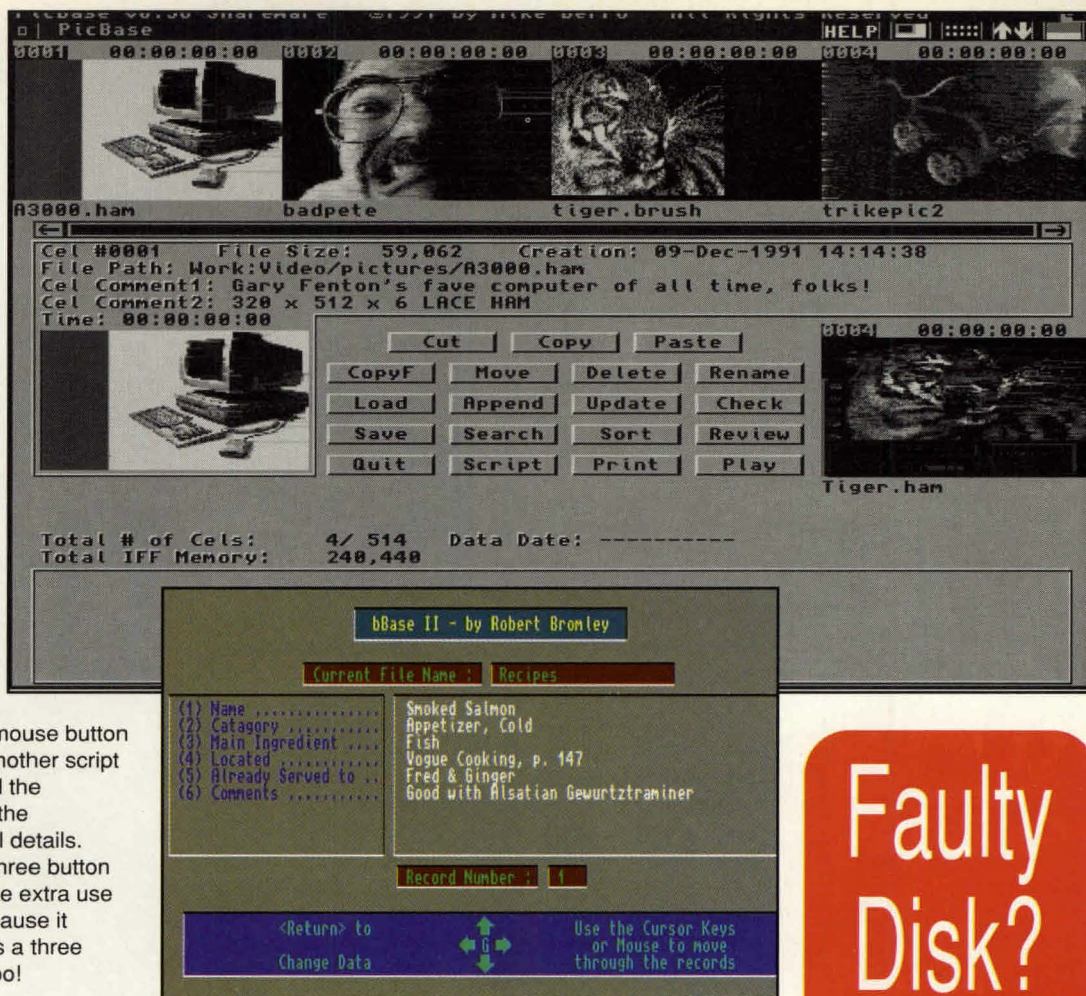
paper, for future reference. To get PrFont working properly, copy it to your Workbench disk, or DPaint disk, making sure you have the correct printer driver you use. PrFont can be run from Workbench or the CLI. Please read the full instructions on the coverdisk for more information.

BootPic

BootPic is more of a novelty program than anything else. It allows you to replace the boring "Insert Workbench" hand with almost any IFF picture, when you reset your computer. It works on 1.2 and 1.3 Amigas as well as 2.04 Amigas. Using BootPic is very simple. Just double click on its Workbench icon and select Load when BootPic loads up. All you do from there is choose any IFF picture (including HAM) and select OK. In no time at all BootPic should tell you everything is ready. Now, reset your Amiga and look what happens. It beats the old hand picture any day!

MB Press

This is a very useful program that unfortunately only works on 2.0 Amigas. MBPress is used in your startup sequence to detect which mouse button is being pressed. This means that if you hold down the left mouse button, MBPress will execute a special script file that you have written. Similarly, if you press the right mouse button it will execute another script file. Please read the instruction's on the coverdisk for full details. Anyone with a three button mouse can make extra use of MBPress because it directly supports a three button mouse too!



SuperJAM! comes with a set of default Keyboard setups for many popular MIDI sound modules. Click once on the Keyboard window, then select Load from the Keyboard menu. Choose a synthesizer from the list in the Defaults directory of the demo. SuperJAM! loads the presets for the chosen synthesizer, including patch names, so you can chose your patches by name rather

than number.

Creating a SuperJAM! Composition

Once you're familiar with the Keyboard window and working with the band, take it one step further and create your own composition. Click on the Section button in the Keyboard window. This creates a new, blank section. Enter a name of your choice into the name requester and leave the section length at eight measures. The Section window opens with a fresh blank section. Notice that the style, tempo, and key are the same as your last choices in the Keyboard window. The strip of coloured rectangles represent the muting status of each player. By default, they are all on. Later, you may control their performance by toggling these. Above the rectangles is the chord and command strip. You may enter chord changes

across the top and commands (Intro, Break, Fill, End) below. Select the mouse edit mode by clicking on one of the top left buttons: Use the pencil button the enter chords, the wand to change them, the eraser to remove them, and the hand to drag them. As you edit, you may click on the play button to hear the result. When you've finished writing a section, click on the Song button (also available from the strip of buttons at the top of the screen.) In the Song window, you may enter multiple sections, edit, move, and duplicate them.

Recording a TurboSample

Once you've created a song, you may record a TurboSample. You can only create a TurboSample from a song that is performing with TurboSounds. MIDI tracks will be blank, since it won't know what instruments to play. Creating a TurboSample is analogous to raytracing. The computer takes a

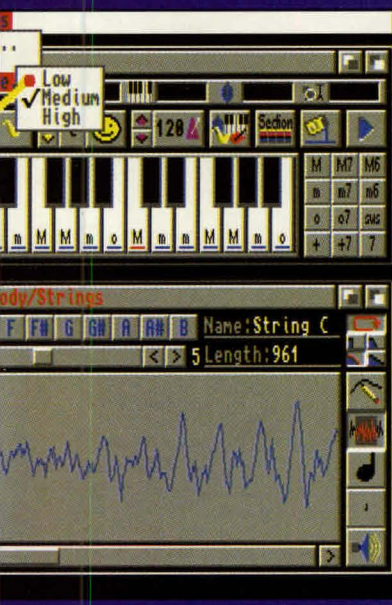
while to create the finished file, which can then play in real time. First, set the TurboSample menu's sample rate option to medium. If you have an unaccelerated machine, you might also select the Preview Instruments option to hear each band member play alone. After previewing each player's performance, select the Record option in the TurboSample menu. This tells SuperJAM! to create a TurboSample. Enter a file name in the file requester. Choose a disk that has plenty of room. Click Save, then Export from the Export requester. Wait for SuperJAM! to record the TurboSample. When it's done, click on the Play button in the song window to hear the completed TurboSample. You may also play your TurboSample with the freely distributable TurboSample Player included with SuperJAM! Notice how much better the TurboSample sounds when being played through the TurboSample Player on a 1Mb machine.

Faulty Disk?

In the event that your UserDisk fails to load, please return it to the following address for a free replacement, and allow 28 days for delivery: **AUI FAULTY DISK RETURNS, TIB Pic, 36-50 Adelaide Street, Bradford, BD5 0EA. Don't forget to include your name and full address in BLOCK capitals.**

Burning Chrome BBS

Thanks to Simon Gardner who helped us to obtain many of this month's utilities. If you have a modem you can contact Simon's BBS on 0 428 727060 (19.2K HST DS V42bis). This is not a voice number, it's only for modems.



The way it is in The Newsfile

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PC Sales down

Dyslexia

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Harlequin 24 bit card

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Cost of pirates

Kid keys

Techno fear



Little mouse

A new mouse, designed exclusively for children has been announced by Logitech. Developed specifically to encourage youngsters aged from 5 to 11 to develop their learning skills, the mouse is available for the Amiga priced at £35.00 plus VAT. Logitech has designed the mouse with maximum child appeal by making it as 'mouse-like' as possible, being grey in colour its casting is mouse shaped, with two buttons for ears and the cable as the tail. (Do children find mice appealing?) The components have been reduced in size without compromising the quality or tracking, say Logitech, to enable it to fit into a child's hand. It comes with a 10 page instruction booklet (gosh - that difficult!) entitled 'Getting Ready to Enjoy Your Kidz Mouse', which, they say, will make it 'ultra simple' for every parent and teacher to supervise the setting-up operation. In addition there is a birth certificate for the mouse with a place for the owner to give it a name. Brendan MacFerran, General manager of Logi (UK) said: "Although we have gone out of our way to give the mouse maximum child appeal, it certainly is by no means a toy". "What we have in the the Kidz mouse is a superb tool to encourage youngsters to learn computer skills at an early age, opening up new horizons of education and entertainment for them. At the same time it very much fits in with Logitech's philosophy of humanising the computer". (Lets hope it doesn't byte!)

Digitiser IV

from Cherry

Tekdata has announced the availability of Cherry Electrical's recently released A3 flatbed digitiser - a low cost aid to precision inputting for all CAD/CAM, CAE, design and DTP applications. Compatible with all standard drawing packages, the Digitiser IV graphics tablet has drivers incorporated for the Amiga. It can be set horizontally or set at a natural working angle of 5 degrees, while the flatbed flush surface is designed to allow easier pen and

cursor movement. Documents up to full A3 size are easily accommodated, and secured in place with a removable transparent overlay. Input can be by cursor - with one data entry and three user definable function keys - or by stylus, equipped with a rolling ball tip for easy freehand sketching. Both can be simultaneously connected, with automatic detection of the active device, and the function keys remain available while the pen is in use. Data transmission can be set between 150 and 19200 baud, with a maximum transfer rate of 100 coordinate pairs per second, while cursor and pen provide accuracy of +0.2mm and 0.5mm respectively. Supplied complete with stylus pen, cursor, power supply and comprehensive manual. R.R.P is 450.00.

directory

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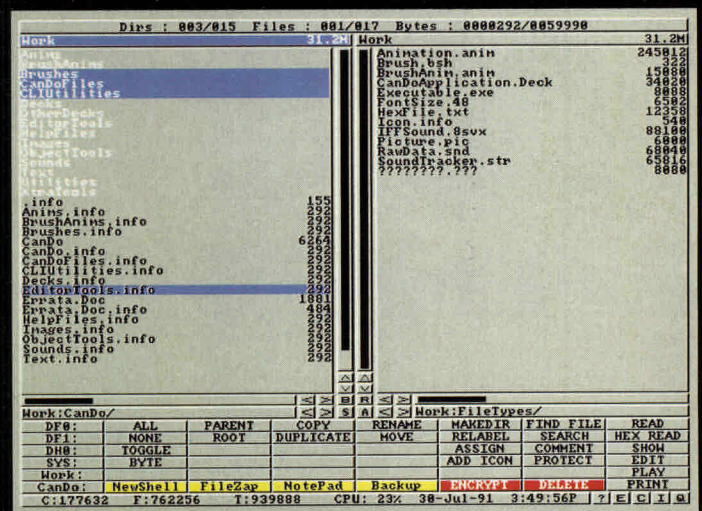
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Understanding dyslexia with the Amiga

The father of a dyslexic boy has developed software specifically designed to aid sufferers of dyslexia. The software uses methods of teaching which get things planted into long term memory, training the movement of the eyes and repeating exercises over and over again to build up accuracy and speed. This enables dyslexics, who tend to mix up letters while reading or writing, to see words as normal readers do. Max Lipman, the software creator, told AUI: "A lot of the exercises involved seeing something with the eye and then doing something mechanical with the hand so that connections were forced to be made. I saw that a lot of these exercises could be played with a machine, that would free up the teacher's resources to do things that required a more personal approach". Dyslexia related problems are experienced by many more people than you may think. According to some estimates as much as 10% of the school population in the UK is dyslexic - accounting for half a million children. Initial reactions to advance copies of Lipman's system have been positive. The first version of the system, which is marketed through Lipman's company 'Sally Systems', addresses spelling and reading skills, the next release will be extended to cover sequencing problems. New modules will introduce special exercises on how to use a dictionary and look at various aspects of grammar. Separate software packages are available to schools who already have Amigas.

Contact: CBM UK Ltd, Tel : 0628 770088.

PC sales down

Recent figures from marketing consultants, Context, have shown that the growth in the sales of PCs has slowed down considerably in the UK since 1989. Price cuts and the recession have hit the market, with the price of PCs dropping by between 25-40% for the past two years. The market research also shows that the

market grew 39.5% by volume between '88 and '89 and nearly 60% by value. Between '90 and '91 however, the volume increase was 23% whilst the market declined by 8.4%. The value of PCs sold through dealers and other indirect channels totalled £1.7 billion last year, representing some 775,000 machines.

BRIGHTEN YOUR LIFE

Verbatim, the floppy disk manufacturers, have recently launched a new promotion in which you can collect tokens from a range of Verbatim products and claim some very interesting prizes. These tokens can be found on boxes of Datalife floppy disks and you collect five tokens before claiming a prize.

Exchanging five tokens in Stage 1 of the competition will guarantee you a 4 Whitbread Leisure voucher on a bottle of wine, ten tokens in Stage 2 - a pair of cinema tickets, and fifteen tokens in Stage 3 - a CD/record or book. There are four stages of Verbatim's promotion and each one includes a competition and

draw to win a trip to Paris, Rome, or New York. The final prize is a "holiday of a lifetime" by Concorde and QE2 to New York. The promotions close on 18th December 1992, so you have plenty of time to collect your tokens. (Let's hope there are some AUI readers that win a holiday! Let us know if you do!).




Can you 99% readright?

US company OCR Systems has launched what it claims is a 99% accurate handwriting recognition software. The company said the pen system can read smudged or broken characters. Most systems currently on the market still rely on constrained characters such as block printing and do not recognise ordinary handwriting. Harry

Gerhardt of OCR Systems said that although 99% is still not a perfect score, resulting in a mistake every 20 or so words, a verification feature in the package questions any confusing characters it finds: "Most humans only read with between 90 to 95% accuracy anyway", he said, "the launch makes handwriting recognition commercially viable".

MUSIC SOFTWARE OFFERS


When you make music with Gajits Music Software, you have the full support of the UK's leading music software developer. Gajits' music software has a reputation for ease-of-use combined with comprehensive facilities, professional quality at an affordable price, and a friendly support service to match. Tens of thousands have been introduced to computer music by Gajits' Sequencer One. And because we can guarantee a high demand for Gajits' products, we can offer you some very attractive prices on a range of software that builds into a complete music system . . .

 **Sequencer One** – Almost certainly the most widely used music sequencer in the UK. For beginner to semi-professional. Full MIDI capabilities with support for four channel sample replay through your computer's own sound output (stereo on Amiga and STE). Real time recording of MIDI instruments. Step time entry over MIDI or from computer. 32 tracks. Track and Cue Sheet Screen. Individual Note Editing Screen. Music Arrangement Page. Powerful global editing options (eg. quantize). Latest version with new user guide.


ONLY £19.95

 **Sequencer One Plus** – New advanced MIDI and sample sequencer. All the features of Sequencer One, plus many more! Includes Gajits' new Diamond Drag note editing system, perhaps the fastest on any sequencer. Unique Juke Box Page allows up to 32 songs to be chained together into an "album" or "live" performance. Also offers new Temp Map Screen, MIDI controller editing, extra sample replay facilities (eg. external replay cartridge support), MIDI sysex handling, and much, much more! Available now for a limited time as an upgrade kit for Sequencer One owners (rrp £49.95).


ONLY £39.95

 **The Hit Kit** – Music composition system to use with Sequencer One and Sequencer One Plus. Create professional rhythm tracks, bass lines, chord progressions, and other accompaniments in a wide range of popular styles. An ideal way to learn. Full MIDI and sample support. Latest version (rrp £29.95).


ONLY £24.95

 **The Sample Series** – A collection of high quality digital sound samples (IFF format) for use with Sequencer One, Sequencer One Plus, and other music programs. Sampled by experts from the best sound sources available today. There are five volumes in the series, each with its own demo tune: **Percussion & Effects, Guitars & Strings, Brass & Woodwind, Synth & Vocals, Piano & Keyboards.** Available separately (rrp £12.95) or as a full set.

EACH VOLUME £9.95 FULL SET ONLY £39.95

 **Companion Editor Librarians** – Top quality professional programs to edit, organize, and back up your instrument. **4D Companion** for D-5, D-10, D-20, and D-110. **CMpanion** for CM-32L, CM-32P, CM-64, and MT-32. Supported by the instrument manufacturer. A full explanation of synthesis techniques is included in the user guide.

ONLY £99.95

 **Amiga MIDI Interface** – Allows connection of Amiga to MIDI instruments. Plugs into Amiga serial port. Top quality design and sturdy build. MIDI In, Out, and Thru. Pair of MIDI cables included.

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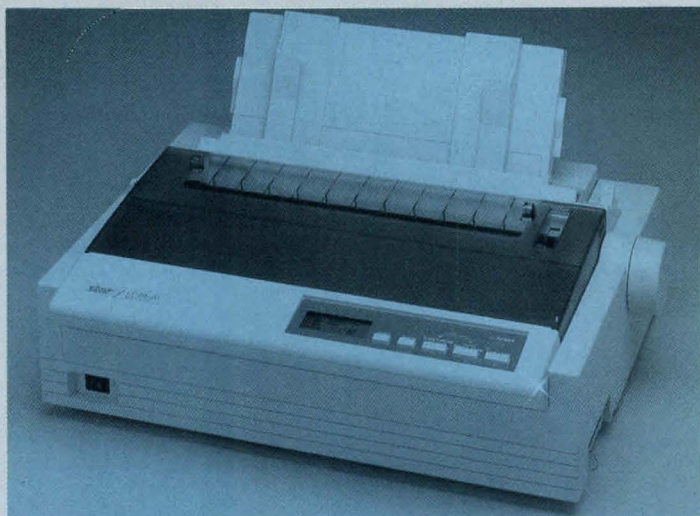
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PLEASE RUSH ME



Star's new entry level 24-pin printer

Star Micronics UK Ltd., has launched the LC24-20, a new entry level 24-pin Business Series dot-matrix printer, which they say is 'aggressively' priced at £259.00 ex VAT, for users in the education, home and business markets. Features include 10 true letter quality fonts including italics; print speeds of 210 cps in pica draft; 192 cps in draft Elite and 64 cps in Letter quality; and advanced paper handling facilities. New features also include a panoramic custom designed LCD panel for simplified set-up; and auto emulation change (AEC) between the resident industry standard emulations. Contact: Star Micronics UK Ltd., Star House, Peregrine Business Park, Gomm Road, High Wycombe Bucks HP13 7DL. Tel: 0494 471111.

CD ROM releases

MicroProse have announced the release of Railroad Tycoon on CD ROM to complement their previously published list. These include: Gunship and Midwinter, Rick Dangerous, Savage, 3D Pool and MicroProse Soccer; M1 Tank Platoon; Red Storm Rising and Carrier Command. Contact: MicroProse, Unit 1, Hampton Road Industrial Estate, Tetbury, Glos. GL8 8LD. Tel: 0666 504326.

Quick chip

Engineers at Glasgow University's Department of Electronics and Electrical Engineering have developed, what they claim is the world's fastest chip, based on a combination of optical fibre and laser technology. The chip is said to offer a 20 fold increase in information handling, compared with conventional technology.

Wye College at Bett 92

Wye College Software's MicroMeasure made its first public appearance at the Bett 92 Educational Technology Show. MicroMeasure is a multi-purpose measuring program for biology, ecology and earth science projects. It measures map and leaf areas, root lengths, angles on plans, animal speed, chart co-ordinates and particle counts - all in real units on zoned screens. It prints data, saves to disk and requires only a low cost genlock, video source and Amiga. There is a free demonstration disk available. The special price for schools and sixth-form colleges is £99 + VAT. Contact: Wye College on 0233 812401.

Personal sound effects

Siren Software has announced the launch of the Personal Sound System. This device is a stereo headphone amplifier for the Amiga that allows you to play games with the addition of the sound effects through the stereo headphones. The 5 watt per channel stereo amplifier measures just 119mm (l) by 55mm (w) by 45mm (h) and features dual volume/balance controls and a 3.5mm stereo headphone socket into which the supplied headphones plug. The amplifier takes its power from the Amiga and plugs into the disk drive port at the rear of the machine. If an external disk drive is already attached to this port, then the amplifier

simply plugs into the 23 way daisy-chain connector at the back of the external disk drive. The computer's audio output is picked up from the left and right phono plugs next to the disk drive port at the back of the computer. The headphones have an adjustable headband, 4ft cable and use low mass mylar diaphragms to achieve a frequency response of 100Hz-15KHz. The Personal Sound System comes with all necessary leads and instructions and, say Siren, can be fitted to any Amiga in a couple of minutes. The RRP is £19.99. Contact: Siren on 061 724 7572.

The Citizen Print Manager, an Amiga printer driver disk, has been launched to give greater printing capabilities for Amiga users. Based on the Irseesoft Turbo Print Professional software package, the disk is priced at £12 + VAT. However during April, May and June 1992 it will be offered to all Amiga users free of charge. (Why? There must be a catch in this.) Citizen currently offer compatibility with Amiga machines via standard Amiga printer drivers. With the new Print Manager driver disk installed, output quality is 'vastly' improved in terms of colour, image quality and control. They claim. (How do they measure this I wonder?) Well they go on to say the benefits of using the Citizen Print Manager include: Improved print quality and 'banding' removed; Image

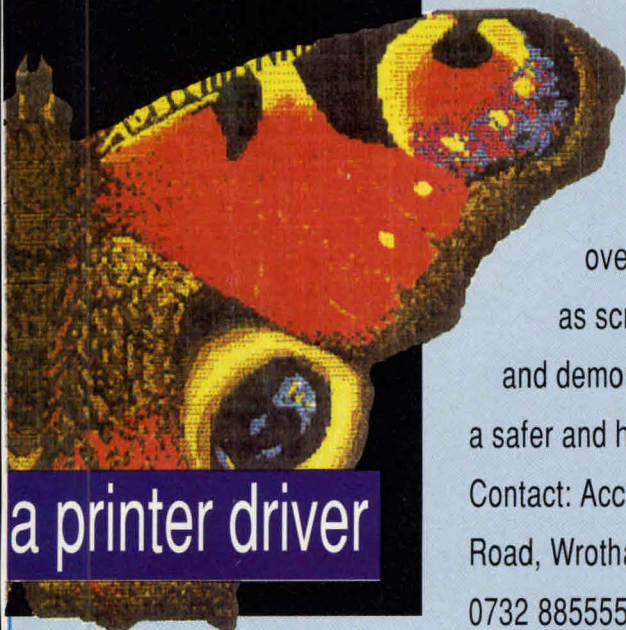


Citizen's Amig

Playroom

Peppey's Playroom has been designed for children from 3 to 8 years to discover a child-sized world filled with games, surprises and learning experiences. The package contains a game book, entertaining drawings and colour pencils. With numerous sound effects, animations and jokes, Playroom gives children the possibility to learn basic skills at their own rhythm. The subject matter includes reading, mathematics, creativity strategy and logic thinking, story telling and keyboarding. The child can print out their drawings created in the ABC book or Mixed-Up toy. Available from Infogrames for the Amiga 500, 1000, 2 000 price £24.99.

smoothing resulting in sharp, high quality images; ease of use - Print manager settings override application settings; Full compatibility with new and existing Commodore operating systems including Workbench 2.04.; Image scaling by width and height; colour and gamma correction assures screen image will be exactly reproduced and gives the user control over brightness of colour. The Citizen Amiga driver can be used with any of the standard printers in the Citizen range, from the entry level 120D+ dot matrix printer to the new ProJet inkjet. Amiga users who currently print on Citizen machines can obtain a free copy of the disk by ringing the freephone number 0800 444276. (Told you there was a catch! Still it's not much use if you haven't got a Citizen is it?!).



a printer driver

Accodata's 1992 Brochure

Organisation is definitely the theme for this month!

Accodata have produced their 1992 brochure entitled 'Organising the Computerised Office' with the EC Directive, due to take effect later this year, in mind. Featuring many new products, the brochure is divided into 7 colour coded product sections, for easy reference. It includes a wide range of computer and printer furniture,

accessories and peripherals

as well as a selection of

media storage, printout

binders and printout

storage products. It also

suggests practical ways of

overcoming typical office problems such

as screen glare, noise and lack of space

and demonstrates how to help make the office

a safer and healthier place for everyone.

Contact: Accodata, Nepicar House, London

Road, Wrotham Heath, Kent. TN15 7RS. Tel:

0732 885555.



PEN PORTABLE

Action Computer Supplies are offering the

Appoint Pen Portable for £69.25

(MRP £99.00). It has resolution of 150 dpi,

and serial (9- and 25-pin) and PS/2

interface. It is compatible with Microsoft

mouse and is supplied complete with

Windows driver and Menu Designer

software. Action now stocks the full range

of Logitech mice, plus the new Pen

Portable mouse which is shaped and used

exactly like a pen. Logitech's range

includes 6 new models; the PS/2, Cordless

and Pilot versions of the Logitech

Mouseman, and PS/2, bus (XT/AT) and po

rtable versions of the Logitech Trackman all

available from Action. All models of the

Mouseman have resolution of 400 dpi,

Microsoft Mouse compatibility and Windows

drivers. The PS/2 and serial (9 and 2 5-pin)

interface, is offered at £98.50; both have

Menu Designer and Lotus 1-2-3 Menu

software. The Pilot Mouse, at £22.50 has

serial interface, and is supplied with

'Pipemania' game software. The PS/2 and

bus models of the Trackman, both offered

at £69.95 have resolution of 300 dpi,

mouse systems compatibility and include

menu designer software. The Portable

Trackman, at £69.25, with serial and PS/2

interface, has resolution of 200 dpi, is

Microsoft Mouse compatible, and is

supplied with cursor control

and Menu Designer software. All three

models have Windows drivers. Action sells

leading brands of computer supplies,

hardware, datacomms equipment, magnetic

media, office equipment and furniture at

discounted prices through its free

catalogue, and provides a free telephone

service on 0800 333 333 and a free fax

service on 0800 10 20 30. Contact: Action

Computer Supplies, Alperton House,

Bridgewater Rd, Wembley, Middlesex. HA0

1EH.



Citizen's

first inkjet

Citizen have launched their first desktop inkjet printer.

Features include: Three resident fonts; 50 nozzle print head; print speeds of 360 or 240 cps draft, 120 cps LQ; 8KB buffer; 300 x 300 dpi resolution. Options include: second automatic sheetfeeder; tractor feeder; numerous font cards; IBM/Epson emulations.

Contact: SPA Ltd, 18 Bolton

St. London W1Y 7PA.

Tel: 071 493 3662.

Making Amiga music in Birmingham

To meet the requirements of the National Curriculum, the Birmingham Local Educational Authority has bought in 105 Amiga 500 computers that will be evaluated in Art, Design and Music departments in the city's 80 secondary schools. The evaluation scheme was introduced to give schools an opportunity to incorporate the computers into the National Curriculum without having to invest in the machines themselves. Since the scheme began three months ago, it has been such a success that some schools have decided to buy their own Amigas. As part of the scheme, a music technology centre has been set up in the Joseph Chamberlain College, funded by the LEA and the Technical Vocational Education Initiative Extension (TVE). The centre will act as a test and development site for music software, curriculum materials development and staff training for the Amiga - an as yet underexploited market. Birmingham LEA's IT Project manager, Mike Kendall told AUI that the Amigas had been chosen because they offered: "The most suitable platform to support the creative arts...Most of the art and design teachers already knew about the software and what it could do." The authority also purchased copies of Deluxe Paint III from Electronic Arts for the art departments and MRS from Dr T's for the music departments.

Can the MS-DOS PC become the home computer of the Nineties? Many PC manufacturers are trying to convince the games player that this is the way to go. So far with great success in the U.S.A but not too spectacular a result elsewhere. Commodore has become the latest hardware manufacturer to enter the leisure PC market, unveiling a package costing £699. The pack contains a standard 16 MHz 286 PC with 40 Mb hard drive, mouse and keyboard and comes with a colour VGA monitor, stereo speakers and Ad-Lib Sound Card. Included in the pack are six entertainment titles, the majority of which come from Domark, an interesting diversion from Commodore's traditional bundling partner - Ocean, which has been heavily involved with nearly all of the firm's previously successful Amiga bundles. The full line-up is Hard Drivin' II, Trivial Pursuit, Castle Master, Mig-29 and Escape from the Planet of the Robot Monsters from Domark plus Mindscape's Wing Commander. As with all new Commodore PC's, the new leisure pack comes with the firm's 'Commodore Key' help system pre-installed. (See further news story in this issue). Other extras include MS-DOS Version 5.0 and 12 months on site maintenance. Commodore say it compares well with its competitors, with the two closest - Amstrad and Goldstar - offering packs at £899 and £799 respectively.

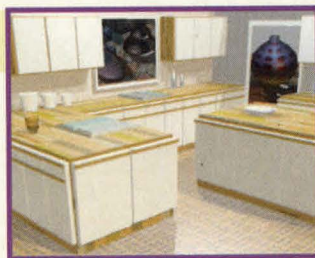
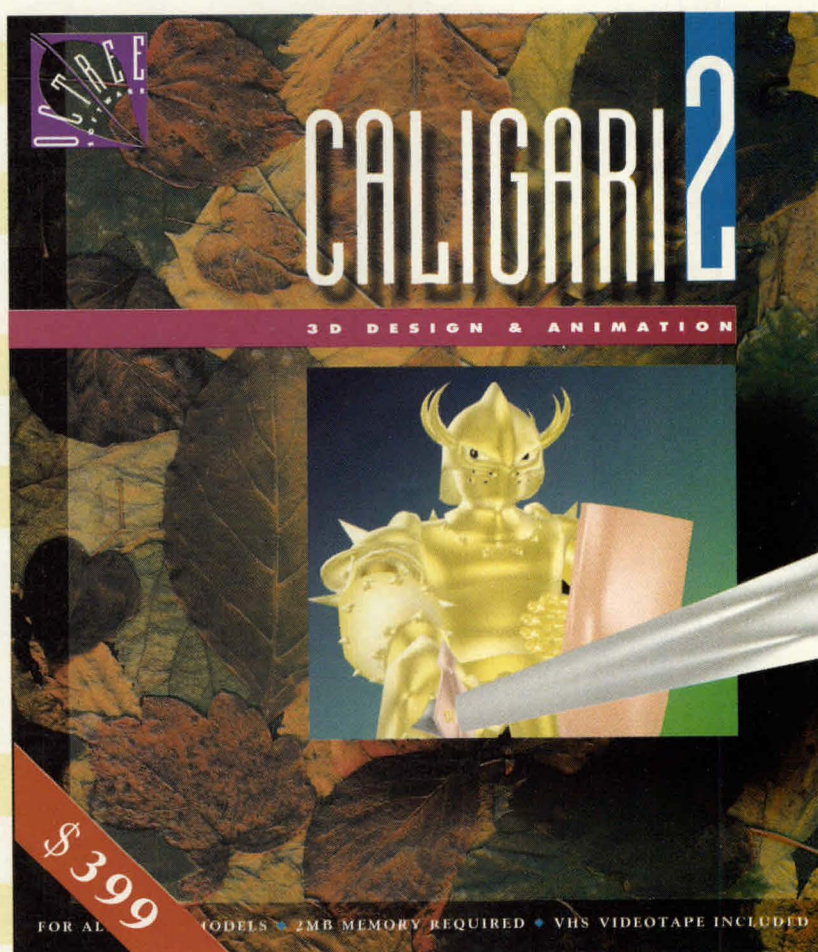
Commodore's
leisure bundle



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- Full color output to HAM, HAME and DCTV frame buffers
- Interactive spline based animation with real time preview
- Fully compatible with Videoscape, LightWave and Sculpt 4D object formats
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- Support for 68030/040 accelerators
- Full implementation of Caligari Broadcast 2.0 technology.



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The products mentioned above are registered trademarks of the following companies: Caligari2/Octree Software, Inc.; Amiga/Commodore Business Machines; DCTV/Digital Creations; HAM-E/Black Belt Systems, Inc.; Videoscape/Aegis; LightWave/Newtek; Sculpt 4D/Byte by Byte.

Harlequin news

Amiga Centre Scotland have told AUI that a number of new developments are happening on the Harlequin front. The high-powered and high priced graphics board is proving very popular for the professional graphics users and new products are emerging apace. Some of the more recent are: V. LAB: A real-time YUV video digitizer. This is a Zorro II board with two composite video inputs and 768K of Field Ram. This means it is much faster in transferring image data than those using the parallel interface. The software makes full use of Workbench 2, which it requires, and provides grey scale monitoring on the Amiga screen, supports all Amiga graphics modes and file formats up to 24-bit IFF. In addition it also allows the images to be directly loaded to the Harlequin. VLab also offers full ARexx support. GST2500 ALPHA+: Still under development for Harlequin users involved in video production, the GST2500 Alpha+ is a combined Amiga genlock, PAL encoder and keyer. It takes Amiga RGB, External Video and Harlequin RGB as input as well as a digital key from the Amiga and a linear key signal from the Harlequin. These three video planes can be combined and the video input and output can be RGB, YUV, Y-C and composite. The specifications are subject to change. HARLEQUIN UNIX DEVICE DRIVER: This is currently under development and should be available shortly. If you have a requirement for Harlequin support under UNIX please let Amiga Centre Scotland know and they will help you. HISOFT PASCAL: Working in conjunction with HiSoft, the in-house software developer has produced an interface unit for owners of HiSoft Pascal to access the Harlequin library. Users of other languages should contact ACS with any special requirements. UNDER DEVELOPMENT: FORTRAN: For scientific applications of the Harlequin, an interface for Absoft Corporation's Fortran 77 is being developed. Together with the Public Domain AIM software this will push the Harlequin still further ahead in the areas of image processing and image analysis. XSPECS: XSpecs is a product from Haitex Resources Inc, which allows the user to view stereoscopic images on an Amiga screen. Work is underway by ACS to extend this facility to the Harlequin, allowing stereoscopic images in 24 bit colour. Contact: Amiga Centre Scotland, 4 Hart Street Lane, Edinburgh. EH1 3RN. Scotland. Tel: 031 557 4242.

Seikosha's new labels

Seikosha's new smart label printer can provide, at your fingertips they tell us, 47 different fonts - see illustrations. The RRP is £249.00 (ex-VAT). The SLP Plus is a compact, multifunctional label printer designed to output high quality labels and has new capabilities in addition to those featured in the first SLP. The SLP has been designed to bridge the gap between the complicated set up procedures of the dot matrix printer and cumbersome nature of the typewriter. The printer offers facilities to print a one-off label needed for a letter within 13 seconds, or to tackle a lengthy database print run from a variety of software applications. The SLP can handle text, barcodes and graphics, and offers an unlimited memory capacity.

The printer utilises one size of label - 90 mm x 32 mm - and can print six lines in depth. The user can mix text, barcodes and graphics on one label, with a choice of horizontal or vertical orientation. The printer will automatically format and position the label before printing, however, the new WYSIWYG user interface allows the user to preview new or altered labels and can be stored on the unlimited memory capacity. Contact: Seikosha Tel: 0753 685873.

Quote of the month

A US analyst explains why computer companies don't seem to be making money anymore. "With the companies constantly leapfrogging each other with machines that run the same software, the industry seems condemned to ceaseless innovation, price cutting and product cycles that are nasty, brutish and short."

As Alvin Toffler said back in the Seventies we are all suffering from "future shock" and no-one is being hit harder than the computer companies. They have to create products that are having a shorter and shorter life span. But if they don't, their own life spans will be "nasty, brutish and short" which, as of course you know, is the phrase originally applied to the life of primitive Man. Is technology still at the primitive stage?

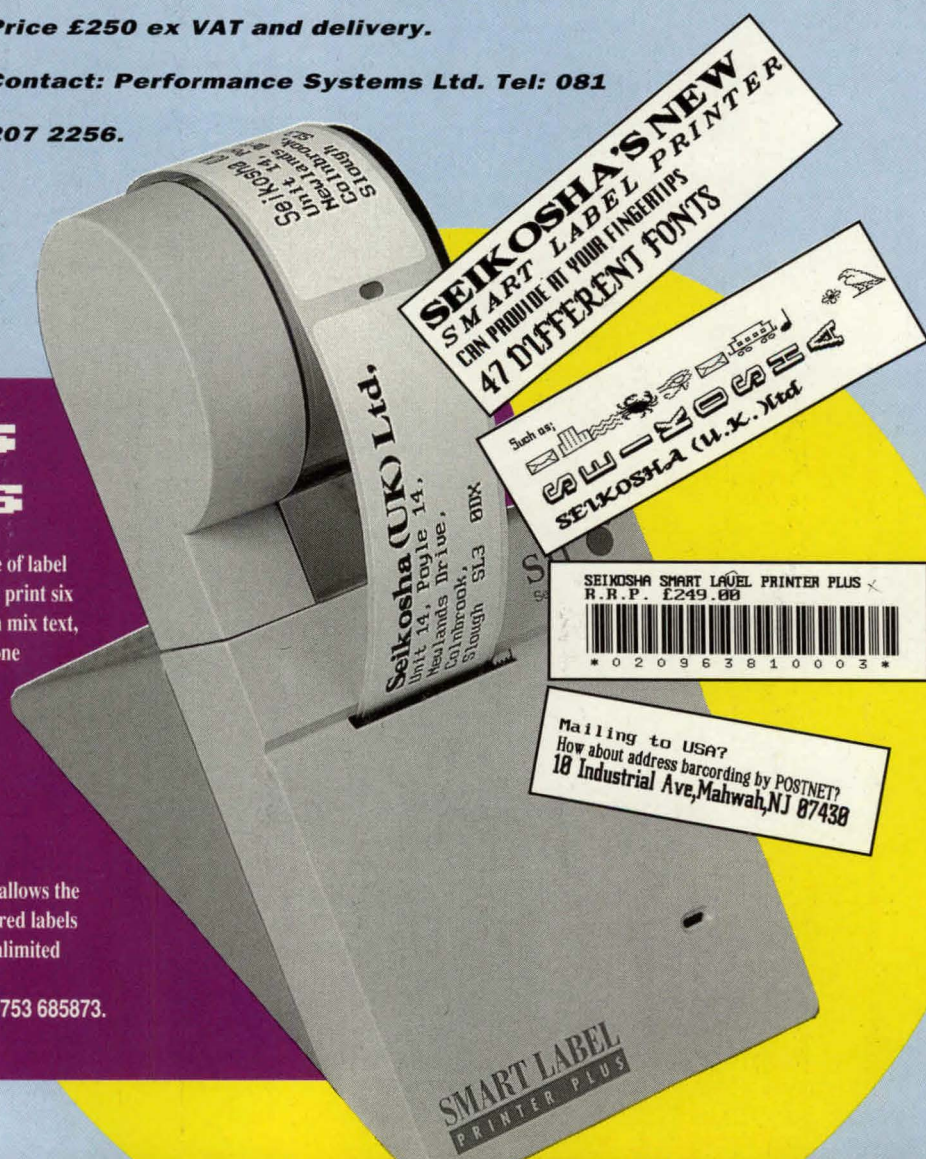
Rack mount kits

Performance Systems Ltd. have told AUI that they now have available 19" rack mount kits for the A1500/2000 and 3000. Its features include: standard 19" Rack fitting; heavy duty metal enclosure; Amiga 1500/2000 4U high and Amiga 3000 3U high. It brings power switch, mouse, and keyboard connectors to front panel. It comes supplied with 1.5m mouse and keyboard extension cables; cutouts for a second 3.5" disk drive and 5.25" disk drive on Amiga 1500/2000; removable lib for easy access to computer; and front mounted handles.

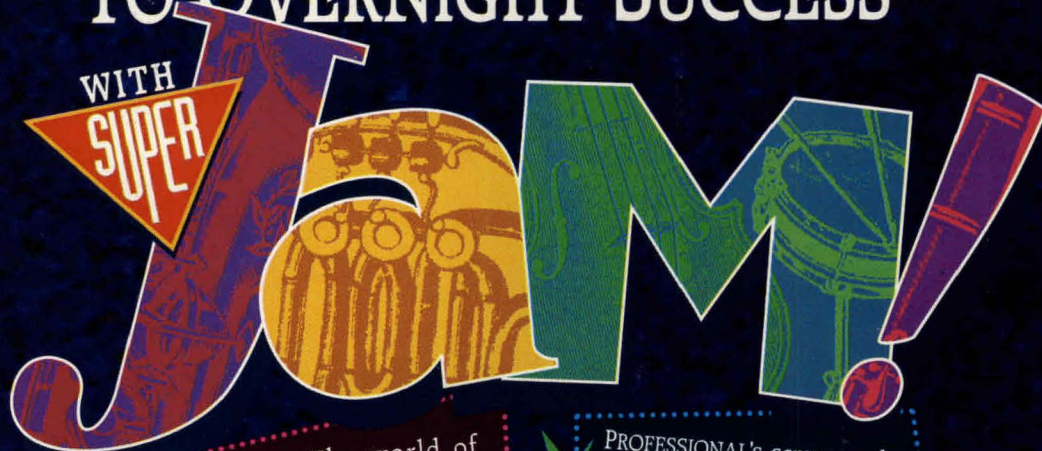
Price £250 ex VAT and delivery.

Contact: Performance Systems Ltd. Tel: 081

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The world of music is yours for a song with SuperJAM!, music software for the tone-deaf and talented alike. Its ability to write music in an unlimited number of styles will open your ears to fresh ideas, exciting rhythms, and mesmerizing feats of all kinds.

Never before has writing music been so easy! Using SuperJAM!'s expert features, you can create your own chords, rhythms and bass lines, whether you read music or not. You can invent drum tracks, design sections, and combine musical styles at the touch of a button. In fact, you can compose an entire song without ever touching a musical instrument.

With SuperJAM!'s new TurboSound Technology™, you can instantly transform your Amiga into a multi-voiced music machine capable of playing up to 16 different instruments at once*. No additional hardware required! Plus, you can invent and edit your own musical instruments and sound effects using SuperJAM!'s TurboSound editor.

If you own any MIDI-compatible instrument, you can use SuperJAM! to arrange electronic music. And, if you're a BARS&PIPES PROFESSIONAL user, you can seamlessly integrate SuperJAM! directly into BARS&PIPES

PROFESSIONAL's screen and use both programs at once!

SuperJAM! comes complete with everything you need to write music including an on-screen piano keyboard that plays complex chords with the touch of a single key. With SuperJAM!'s Editing Grid, you can play your own drum tracks and accompaniments using only the mouse. You can select from dozens of specially designed instruments – such as piano, bass, guitar, and drums – to create your own individual sound, or to imitate songs you know and love.

Use SuperJAM! to create and synchronize soundtracks for animation, video and multi-media presentations. Play along with your favorite tunes or write the next hit song.

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- Snapshot editing and recording
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- TurboSound Technology, with more than four Amiga voices playing simultaneously
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- Synchronization with leading multi-media applications
- AREXX compatible
- Supports standard BARS&PIPES AREXX commands
- Includes dozens of specially-designed TurboSamples (a \$49.95 value!)
- and much, much more!

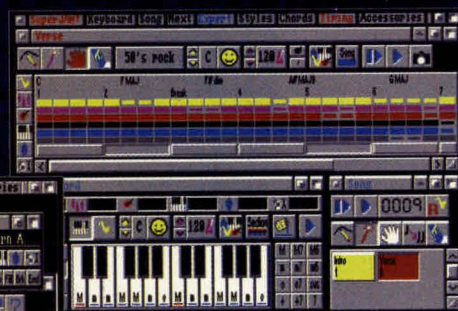
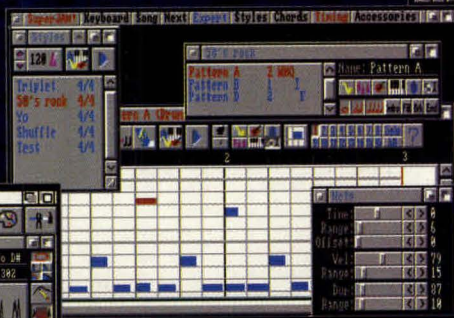
HARDWARE REQUIREMENTS

- Workbench 1.3 or 2.0
- 1 meg of memory
- Amiga 500, 1000, 2000, 2500, 3000

*Results will vary according to your computer's memory and processor speed. A MIDI instrument is recommended but not required. All specifications subject to change. SuperJAM!, TurboSound Technology, BARS&PIPES and BARS&PIPES PROFESSIONAL are trademarks of The Blue Ribbon SoundWorks, Ltd.

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Create rhythmic and melodic patterns easily.



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The cost of pirates

The Software Publishers Association of the U.S.A has released the results of research which shows that some \$4.46 Billion (around £3 thousand million) was lost to software pirates in Western Europe during 1990. The research, based on data gathered by the SPA and International Data Corporation on software and hardware sales figures, compares results from studies on the average number of software programs utilised by computer users. Some areas are apparently making progress in the fight against piracy, Scandanavia was one and, more notably, the UK and Ireland were the others.

Commodore's

key to combat

Techno fear

Commodore has launched an innovative software package to make its computers easier to use. Installed free on entry level 286 and 386 SX machines, the "Commodore Key" has been designed to help the first time user to be up and running within minutes from the moment the PC is switched on. Steve Hollender, Commodore's PC division sales director told AUI: "It is vital for the PC industry to recognise that many potential users have little knowledge or interest of how a computer works. By removing any reliance on computer jargon, the Commodore Key makes the computer as easy to use as the office photocopier or fax machine". (I hope it doesn't break down like our photocopier! Ed.). Corporate users can also encourage staff to make better use of the company's computer

resources. Terminals can be programmed to greet users with personalised messages and specific operating instructions. Machines can be configured for individual preferences. More confident users can also take advantage of the many time-saving utilities presented by a 'Disk Manager' menu option. Functions such as copy, delete, move and edit can all be performed quickly with no prior knowledge of DOS commands. A directory tree allows speedy reorganisation of files and directories, and features such as a calculator, time management system, phonebook and notepad can all be accessed via pop-up screens. Well, MS-DOS has the reputation of such an unfriendly nature that perhaps Commodore is performing a real service to MS-DOS buyers. Of course, it might be easier if they installed an Amiga board in the PC to start with...

KID KEYS



This is an interesting idea for anyone with young children who might find it difficult identifying keyboard letters. "Kids Keys" converts the keyboard of any computer to lower case to prevent children being confused by capital letters. It retains the usual keyboard layout and so is suitable for any software. Produced by Triple 'R' Education it costs only £2.95 and is easy to fix by using the self-adhesive hook and loop fixer. **Contact: Triple 'R' Education, 1**

Percy Street, Sheffield .

Tel: 0742 780370.

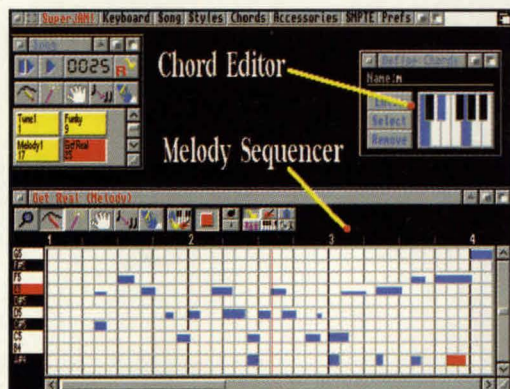
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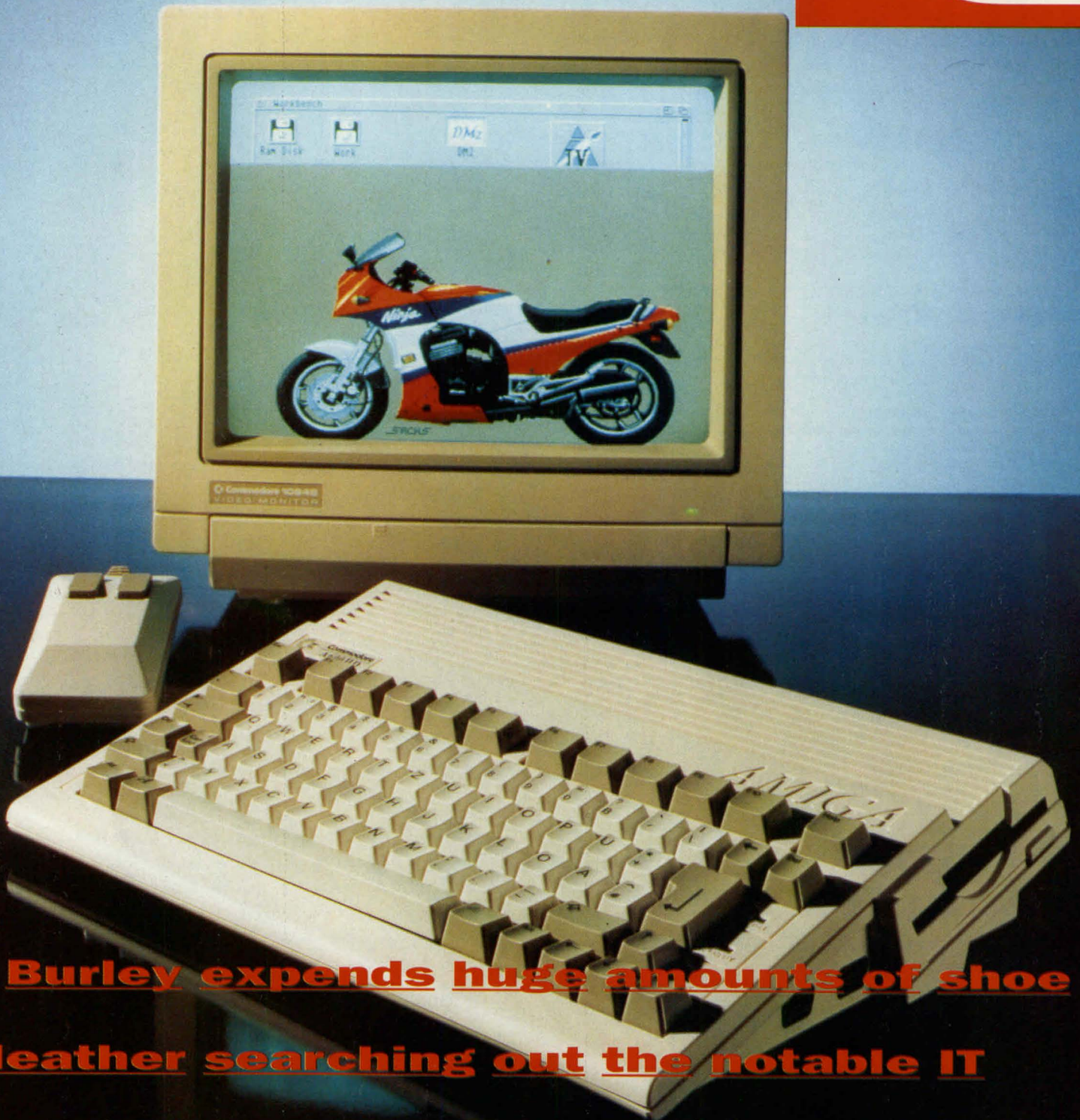
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The
A600

at
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Ian Burley expends huge amounts of shoe leather searching out the notable IT

additions at the world's biggest computer

event and finds nestling among them CBM's

long-talked of A600.

00 Arrives eBIT

The world's biggest annual IT event isn't, as one might assume, in the USA but rather closer to home at the CeBIT Hannover Fair in Germany. This year CeBIT (Centrum Buro Information Telekommunikation) offered visitors the daunting challenge of visiting no less than 5,300 exhibits in 21 exhibition halls, four halls up on last year. At least half a million visitors took up that challenge during CeBIT's 8 day duration. Commodore traditionally has a big presence at CeBIT. For Commodore the German market alone is bigger than that in the US. It was then no surprise that Commodore GmbH was given the privilege of launching the new Amiga 600 as well as the long-awaited 'computer' version of the CDTV MultiMedia system.

Two Amiga 600 models were announced. The good news is that unlike the Amiga 500, which it must surely supersede sooner or later, the 600 has room for an internal hard drive. This is despite the 600's considerably more compact dimensions compared to the 500. Gone is the numeric keypad leaving the 600 endowed with an overall width comparable to a notebook computer. The 600's wedge shape dictates that the side-mounted floppy drive is tilted in line with the top profile of the case.

Hard Drive and PCMCIA

600 owners can forget having to bolt on a modest external hard drive like the A590, instead there is an optional 20 or 120Mb internal IDE standard drive thanks to compact 2.5" drive technology. Commodore at CeBIT told me it is already shipping the 20Mb 600HD, with the 120Mb version to follow within weeks. The other notable feature of the 600 is its PCMCIA interface. PCMCIA is a standard for credit card sized external slot-in peripherals, usually memory expanders - though not

always; UK modem maker Dataflex has just announced a 5mm thick PCMCIA credit card modem, for example. The PCMCIA standard covers battery backed and 'flash' RAM, with individual cards capable of storing several megabytes of memory. It's not inconceivable that you could store Workbench on a PCMCIA card rather than load it up via the more cumbersome floppy disk route. However, it's more likely that these cards will be mostly used as homes for games, replacing the more expensive cartridge variety familiar to Amiga 500 users. The cards will certainly be much less easy to pirate than cartridges. However, there are some early concerns that the new machine's revised architecture has compromised software compatibility. The problem is said to be more a minor annoyance than a serious problem, but don't expect all your existing Amiga software to run on the 600 without a bit of tweaking. The bad news is that the 600 retains the original and arguably out-dated 7.14MHz 68000 central processor. Even Atari has managed to introduce a 16MHz 68000 into some models of its Amiga-competing ST range, while AUI's view is that a full 32-bit 68020 or 68030 processor should be the minimum specification seven years after the original 7.14MHz Amiga 1000 was born. At least the latest versions of the Amiga chip-set are supplied and standard memory is 1Mb,



The Sanyo Data Discman clone

expandable to 10Mb. Workbench 2.0 is standard as well, as is a UHF TV modulator. Unlike the CDTV version of the Amiga, a MIDI interface has been left out of the 600's specification. The 500's A570 CD ROM drive was in abundance on the Amiga exhibit and 600 owners can expect an A670 CD ROM for them later in the year.

120MB... Under
£500

Pricing is very competitive. The standard Amiga 600 without a hard drive is set to sell in Germany for about DM900, or



Commodore making a stand

about £325. That roughly equates with the local price for an Amiga 500 Plus. Apparently the 20Mb 600HD is only about £100 dearer. The 120Mb 600HD is set to sell for about DM1200, or just under £500. How these prices will translate into the UK high street will certainly be interesting.

The other main attraction of the Amiga portion of Commodore's exhibit was the 'new' CDTV workstation. In

other words Commodore has finally delivered the extra bits and pieces it has always promised which turn the CDTV MultiMedia machine into a fully functioning Amiga computer. This adds up to an RGB monitor, external floppy drive, mouse



The abundant A570 CD ROM

and an Amiga 2000/3000 style keyboard, all tastefully finished in matching black. Sir Clive Sinclair would have been proud of the truly imposing all-black CDTV workstation. Like the new 600 there's a hard drive option between a 20 and 120Mb unit. Commodore had a huge wall of video to support half-hourly applications demonstrations, such as MultiMedia and this regularly blocked the adjacent aisles! Third party guest exhibitors also attracting attention included HS&Y showing off the Real 3D solid modelling and ray tracing package. There was also a very impressive semi-pro video graphics system, which appeared to be running off an Amiga 500. The Interchannel Videocomp might go some way to compensating for the

absence of a European version of the highly successful Amiga-based Video Toaster system in the US. A touch-screen demo ably showed off Videocomp's abilities. Away from the Commodore stand there was, naturally enough, loads to see. Here's a small sample of what my shoe-leather paid out for. Canon announced a beefed up version of its delightful BJ10x portable bubble-jet printer. The BJ20 complements the BJ10 by being faster and comes with the sheet-feeder as standard. The BJ20 will be priced about the same as a BJ10 with optional sheet-feeder. Amstrad sprang a surprise at CeBIT by announcing no less than four new PC models, including a colour notebook PC and two very high specification 486 PCs, one of which uses the latest 32-bit EISA (extended industry standard architecture)

expansion bus. If that's not enough, Intel will be making the new PCs in Ireland for Amstrad. This came just weeks after some pundits predicted Alan Sugar would be taking Amstrad out of computers altogether.

2.5in Disks

Sanyo revealed a Sony Data Discman clone. The Data Discman is Sony's foray into the fledgling electronic book market with a proprietary CD ROM standard based around a small 2.5" disc. It's not so proprietary now that Sanyo has brought out its own version. The Sanyo model adds simultaneous text and speech as well. Back to Sony and this time its incredible ultra-compact digital tape recorder. The unit is the size of a micro-cassette recorder and up to two hours of stereo digital sound can be recorded on tiny one inch cassettes. The in-ear headphone units supplied dwarf the said cassettes. Don't expect to buy one soon and even after they're available you won't get any change from £500. I also spent some time looking at ISDN (integrated services digital network) tele-conferencing services, videophones, GSM and PCN digital mobile phone systems, LCD replacements for conventional cathode ray tube monitors and much more interesting stuff that will soon, idubitably, be appearing a screen near you soon.. And the beer's really good in Hannover! ■



hard copy

Science hit the movies back in 1910, and Trekkies and their like are still eating it up, as Daphne Moss discovers.

THE PRIMAL SCREEN by John Brosnan (Orbit £16.95)

If the names of Robby the Robot, Gort or Quatermass mean anything to you then you'll love this book. It's a history of science fiction films from the 1910 production of 'Frankenstein' to the latest Star Trek movie, (No.VI), which arrived on our screens only a few weeks ago. It is a look at all those celluloid cycloramas which, through the years, have held science fiction fans spellbound on the edge of their seats, open-mouthed at the special effects, or squirming with embarrassment at the comical lack of knowledge of the subject displayed by some of the writers and directors. Many of the films have become classics. 'The Day the Earth Stood Still', in which Michael Rennie played the alien Klaatu, protected by the giant Gort; the original 'Invasion of the Body Snatchers', and who will ever forget the pod people? 'Close Encounters', 'Star Wars', 'E.T.', and perhaps everybody's favourite, 'Forbidden Planet', which brought us Robby the Robot, arguably the most anthropomorphic of all the metal machines. John Brosnan takes us behind the scenes and tells how some of the movies came to be made, why he thinks some of them never should have seen the light of day, and what made many of them great. By definition it's a subjective look and I don't agree with all he says, (he dislikes 'Barbarella', which I love), but he knows his subject.

Liberally illustrated with hundreds of stills 'The Primal Screen' is a must for all aficionados of science fiction films.



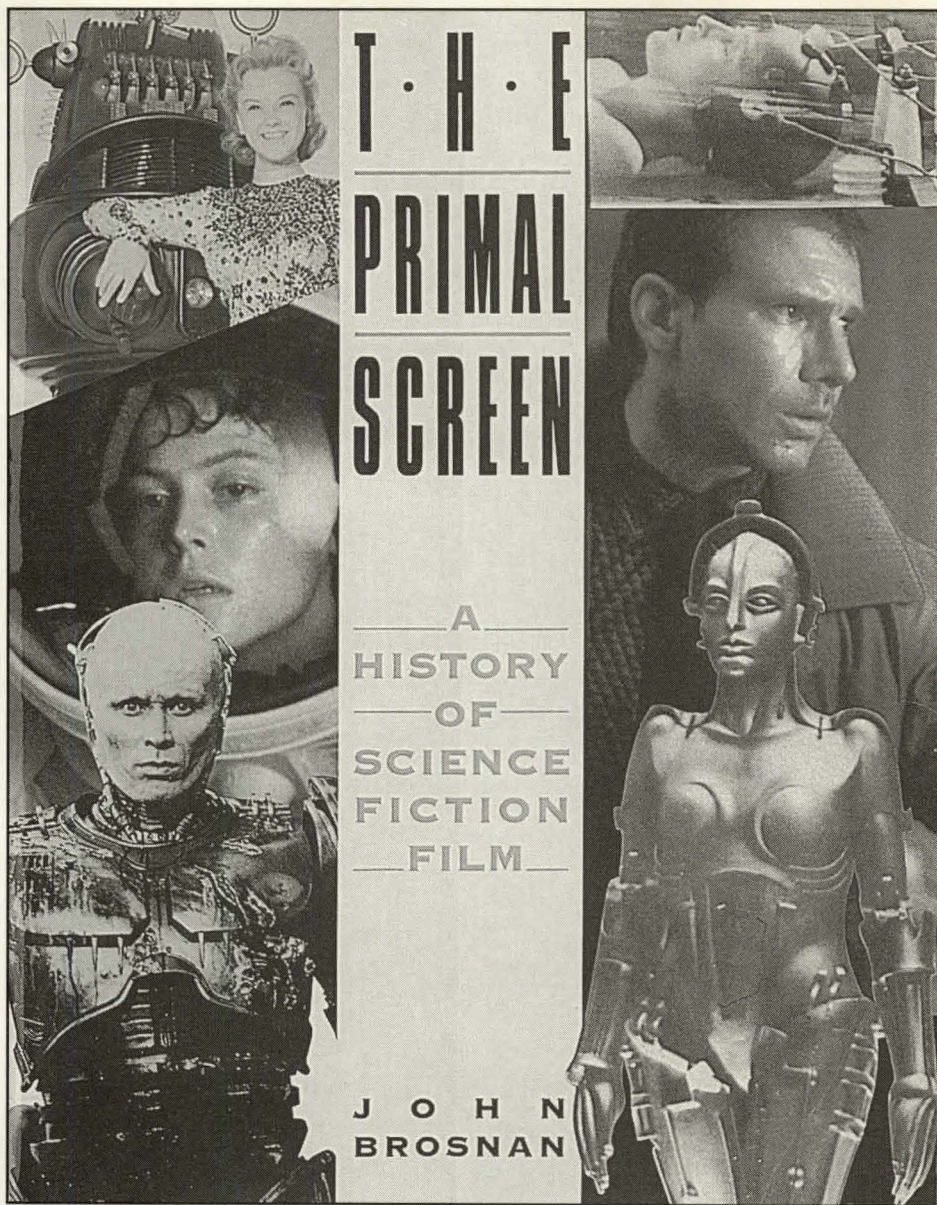
VIRUS William Harrington

The idea on which William Harrington has based his book is thought-provoking. Eccentric computer genius Darius Whitney has

lost his company in a take-over and, to get even, he inserts a virus in an airline reservation program the company has marketed. It's a one-day only virus but, as you can imagine, all hell breaks loose when it takes effect. Some planes have multiple bookings for the same seats, others leave the airport absolutely empty. The success of the virus is learned of by a Colombian drug baron who, by coincidence, is partners with a Japanese computer expert. They track Whitney down and offer to buy his company back for him if he will write a program which will enable them to sneak a plane, loaded with cocaine, unseen through the USA's radar system.

Whitney agrees but, unknown to him, someone else is on his trail. Scott Vandenberg is an ex-U.S. Navy commander who specialises in detecting and curing computer viruses. Due to the national security aspect affected by Whitney's airline virus, Vandenberg is asked by the President to discover the perpetrator.

Cross and double-cross, kidnapping and murder, even a touch of romance are all in 'Virus'. There is also quite a lot of technical jargon which William Harrington translates for the benefit of those unfamiliar with computer-speak, and this does tend to hold up the action somewhat. On the whole, though, 'Virus' is pacy and well-written with a plot that could all too easily come true given the rapid advances of today's and tomorrow's computer science.



It could strike your computer, on Friday 13th or anytime. It can take on the airlines or even the U.S. Government, as Daphne Moss reads in this new book.

VIRUS by William Harrington (Robert Hale £14.95)

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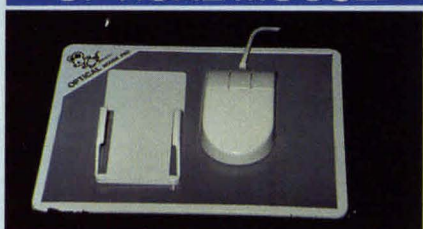
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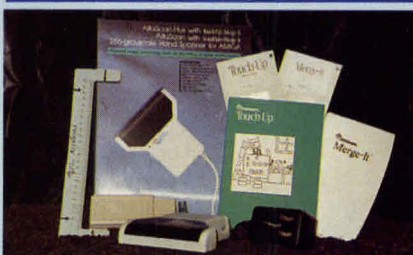
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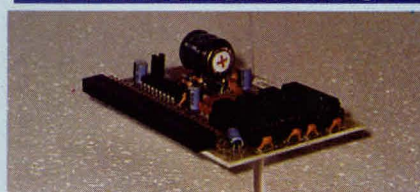
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In Vision II



29 Graphics. Whether making 'Monet' or just for fun, Barry McCarthy illustrates his skills as a Multi-Media montage artist.



40 Imagine 2.0. Barry McCarthy (again!) explores the realms of the imagination and discovers the new king of Amiga 3D programs.



44 The ASDG Interview. Mike Nelson probes Perry Kivolowitz on artful new developments across the 'pond'.



49 The Alternative Image. Anthony Mael visits the alternatively named Yuri Large and Henry Bujko to find out more about their tantalizing new

In this, the second part of our special graphics supplement, In Vision, you can see, many more dazzling items. The way graphical art has evolved, especially since computerisation hit us, is traced. And we cover the interesting rise of a company that not only employs Amigas professionally to create high level video work but has moved into the graphic software business as a result of the applications used in their own experiences. Graphics on the Amiga are getting better all the time and keeping it well ahead of other computers. It always was the greatest advantage that the Amiga offered and such programs as Ad Department Professional ensure it stands up to any graphic requirement. Yes, graphics on the Amiga are still moving forward fast...getting easier, more accessible and more stunning all the the time. And we will, you can be sure, be coming back to the subject in the future to report on even more stunning developments...

Barry McCarthy, a
professional Amiga
image creator, asks
are computer
graphics just a
technical advance
or a new artistic
medium?

but

is

it

art?

I remember a lecturer asking me a similar question in an interview for a Fine Arts Degree course at Bristol. I remember thinking at the time..."Is that a fair question for one so young and inexperienced? Certainly not and I'm not going to go to Bristol even if they beg me." And I stuck to my promise. I was strong. Individual. Arrogant. I was rejected. 19,000 years before the birth of Christ, the cave men of Palaeolithic times painted the walls of their caves for a very specific purpose. They believed that the physical world was under the control of spirits and magic. By painting the animals and activities in their lives they believed they could wield spiritual power over them and control the physical world in which they fought to exist. If you had to endure lives that were 'nasty, brutish and short' you might have done the same. Now, after thousands of years of experimenting, rebelling, struggling. After the invention and discovery of new techniques, ideas, images and new media, are we perhaps at a new era in art? A whole new direction. The discovery of vastly different and exciting new techniques, stunning new imagery and a brand new medium...computer graphics.(Or am I just a pretentious g*t?)

computer art

Computer Art could only come into being with the invention of the computer (It's taken me seven years of further education to conclude that). All this is very new and we are only just starting to discover it's possibilities. Just scratching the surface. The computer is just another medium, like oil paint or charcoal and like all these traditional media, it has its own strengths and weaknesses and its own characteristics. Computers seem to have been used almost exclusively as tools up to the present but I am sure that as they become more powerful and more generally available, the idea of computer Art for Art's sake will arrive. Already there are several artists using this new medium for their work. I do, and not just for a living. I'm sure most people with an Amiga must have doodled around with Deluxe Paint at one time or another. Not for any particular reason. Just for pleasure.

A new medium should offer specific qualities differing it from other media. It's no good simply painting a landscape on a computer and calling it 'Computer Art'. You might as well do it in paint and then digitise it. Personally I'd have a lot more fun with a six foot canvas and a few tins of oil paint. We need to make sure we are really USING this new medium. Pushing and pulling it to its limits. Squeezing the possibilities out of your little buff box. Experimenting. Exploring. So let us

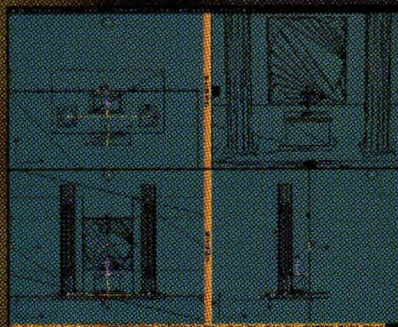
→ be, computer artists...

Oh my brain's...

The first thing you have to do, when you start a new work of art, is think. Computers may seem quite clever but unfortunately it's YOU who has to come up with the ideas to create. You can't just rush onto your computer and expect something to simply happen. It's all got to be thought about and planned carefully. The ideas in your head are like the results of a huge cooking pot. Years of TV, films, books, travels, experiences, conversations, dreams, all mixed around and pondered. Perhaps new ideas are not really new, just a novel way of putting bits of old ideas together.

'There is nothing new under the sun.' So, working on this concoction theory, I'm going to put a piece of computer art together. I can also draw on the work of famous artists like Salvador Dali and Rene Magritte from the Surrealist Art movement of the early 1900s. Right, what first? A bit of brain storming. I'll just give my personal ideas pot a vigorous stir. This is easier than you think and it gets easier with practise. Yes, you can teach yourself to be more imaginative and creative. It just takes practise, like any other skill (playing the piano, card tricks, art, telling jokes...). Out with my trusty sketch book. A nice thick, colourful one from the Royal Academy in London. This is the sort of equipment that makes you WANT to work. Whatever I thought of, I put down. Some of it is just a list of words, some sketches and drawings. Great stuff.

I've got this vision of a golden slab, a bit like a brass rubbing with the image of an ancient face engraved upon it. The sun rises and the altar of the church is slowly revealed, bathed in golden and coloured light. The view pans slowly from the stained-glass window, across the altar and over the polished floor, onto the slab. The expression on the face changes, as playing over this are the multi-coloured reflections of light cast by the ancient stained-glass window. Nip out to the library and hire some books on Surrealism. Dali and another artist called Giorgio de Chirico. Also one on British Cathedrals and one book of photography from New York (it's full of big black and white photos of various monuments and people from about 1950-60). I also collected a load of old Sunday magazines and some catalogues. Oh, and a few of my old holiday snaps from Santiago in



**"The marvellous thing
about the Amiga is that
you seem to be able to do
virtually anything you want
on it."**



reference material is really useful for loads of reasons. Digitising background skies, interiors or buildings. Using to make textures for 3D or bump maps. It might also give you some ideas for subjects or parts of a composition.

multi-media montage

Sounds clever doesn't it? In fact it's what most people do, when they use the Amiga for art. The bringing together and composing of different media such as drawings, photos and computer generated images. "Hi, I'm a multi-media montage artist. What do you do?". I think I'll have to give that one a try!

The final image will be a DCTV animation that will run in real time, to be dumped to video tape. I'll build a 3D scene that will contain the golden slab on a tiled floor and put it all in a church. The stained-glass window can come from a book and the rubbing of the old chap I'll draw myself, using charcoal. The marvellous thing about the Amiga is that you seem to be able to do virtually anything you want on it. All you need is the software and lots and lots of time and patience. I try never to limit my ideas because of limitations in the equipment. I just presume that it WILL be possible, somehow.

Ingredients

Hardware: B2000 (1500), 68030 card, 9 MB RAM, 140 MB hard drive, Digiview 4.0, black and white camera, 2 angle poise lamps, DCTV and a bicycle (to get the library books from town). Software: Digiview 4.0, Deluxe Paint IV, Directory Opus, Imagine 2.0, DCTV paint, Art Department Professional 2.0 and Quarterback. Materials: Sketch book, Bic biros, Pencils, Scissors, A ruler and lots of old books and magazines. Of course, you could do without quite a lot of the hardware (you could walk to the library) and some of the software. I am just showing you what I think is close to the minimum for semi-professional work of this nature.

Creation

I started by looking through a few books and finding some possible images for the window and the face. I also found a few interesting looking textures for some of the 3D objects. Next step was to draw my chosen face in charcoal. In fact I drew several faces that were fairly similar, so that I could change the expression in the final animation. I



**It's no good simply
painting a landscape on a
computer and calling it
"Computer Art".**

continues page 36 →

Mustang Hang onto this!



Yes, if you win our Mustang print competition you will never want to part with this terrific wall decoration of the artistic kind. One day no doubt it will hang in the National Gallery! Rico Gusman, famed Amiga artist, has explained how to create you own CAR ART on page 56. He has devoted a long time to gaining expertise in how to do it and though you try you probably won't be able to reach his professional standard. So he has kindly offered a set of these amazing Mustang prints, the craze for which is sweeping America, to the winner of a

simple competition. All you have to do is send us in a picture of a car you have created yourself in any Amiga format. The best will get a set of 6 different Rico Gusman Mustang prints - the exact series that the Mustang clubs in the U.S.A are clamouring for!

Your entry - on a disk please - must reach us by 30th June 1992.

Rico Gusman and our designer, Steve Hicks will judge the winner.

**Entries to:
Car Art Competition Amiga User
International Magazine, 116- 120
Goswell Road, London EC1V 7QD**

Competition winners

The January issue of AUI ran a competition to win a copy of Utopia for the Amiga, first prize winners get a joystick too! Winners are as follows:

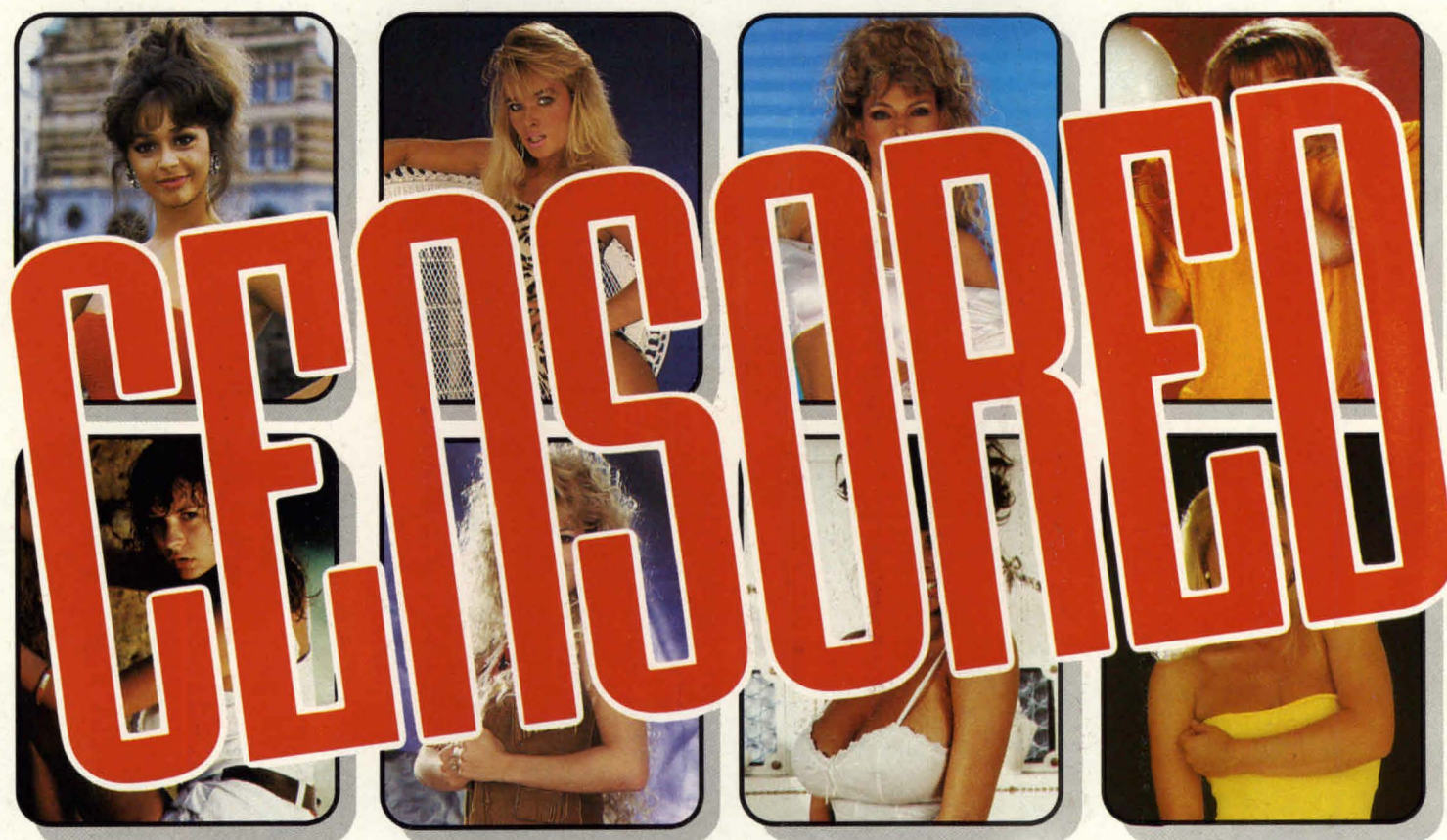
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U195 - Opti Utils 2 - Latest version utilities
U196 - Opti Comms - Ultimate Comms disk
U197 - C Dir Tools - Stuffed full of them!
U200 - Imploder V4 - Latest Release
U207 - Printer Utils - By the Assassins
U209 - Dynamite Fonts2 - More cut n paste
U210 - RSI VECTORBALLS EDITOR
U211 - RSI VECTOROBJECT EDITOR
U212 - RSI FONT EDITOR
U213 - Crossword puzzle creator
U215 - Print Studio - Excellent utility
U218 - Devpac Source codes - Very Good!!
U220/1 - North C Compiler - Brilliant
U222/3/4/5 - C Manual V2 - Excellent
U226 - Gelnig fonts - 52 C-P by Mark
U230 - Converters - Only one you need!!!
U231 - Crunch n Copy - By the Assassins

EDUCATIONAL & GAMES

G01/2/3/4/5 - Ed-Pack - Teenagers & over
G06/7 - Learn & Play - Infant & junior age
G20 - Turrican II Demo - Playable demo
G22 - Tennis - 3D game, needs 1 meg!
G31/2 - Star Trek - By Tobias Richter
G35 - Board Games - Includes Monopoly
G38 - Frankie Freddy - Good arcade fun
G39 - Flaschbier - Excellent game
G41 - Amigaman - Chess V2 also drip
G43 - Megaball - Brilliant breakout clone
G44 - Wacko Jr in Wonderland - Brilliant
G46 - Seven Tiles - Good Speedball clone
G47 - Wizzy's Quest - Very nicely done
G50 - Shapes - Absolutely brilliant for kids

G52 - Merv the Merciless - Excellent
G53 - Zeus - Very addictive tile game
G55 - Sealance - Sub strategy type game
G62 - POM POM Gunner - Very Good!
G63 - Hollywood Trivia - Quite good
G64 - Mental Image 1 - Best PD selection
G69 - Darkstaff - Written with speccy emul
G70 - Skier - Excellent game
G72 - Snakepit - Suitable for the kids, good
G73 - Blockit - Very nicely done by EP
G75 - Card Games - A choice of three
G76 - Ready Robot - Educational pre school
G80 - Peter's Quest - Lovely graphics
G82 - The Maze - Incredible 3D maze
G83 - Tomtespetel - Needs two players
G87 - Llamatron - Brilliant by Jeff Minter
G89 - Chinese Checkers - Addictive game
G90 - Mayhem - Similar to Datastorm
G91 - Insiders Club - Stock Market strategy
APD59 - Super Quiz - Excellent quiz game
APD62 - Arcadia - Nice breakout clone
APD110 - Crossfire - Very nicely done
APD115 - Baloonacy - Superb for the kids
APD130 - Wooden Ball - Brilliant!!!
APD137 - Tile Trial - Good tile game
APD142 - Pair Crazy - Very good
APD146 - Fruit Machine - For the addict
APD148 - Demolition mission
APD149 - Gobbit/Pontoon - Both good
APD178 - Mastermind/Pairup - Good
APD180/1 - Dungeon Delver - Brilliant
APD182/3 - Pixie Kingdom - Very good
APD314 - Blackjack Trainer - Superb
APD315 - Silver Bars & The Enemy
APD326 - Hyperball - Best yet, get it
APD329 - Fruit Machine - Brilliant game
APD334 - Snake in the Grass - OK

BUSINESS & SERIOUS

B02 - Wordwright - Wordprocessor
B04 - Clerk - Accounting
B06 - U-Edit - Very powerful wordprocessor
B07 - FleKsibase - Powerful yet easy to use
B08 - Rim Database - More involved
B09 - Amibase V3.76 - Excellent database
B10 - Inventory & Memopad - Very handy
B12 - Business Card Maker - Pretty Good
B14 - Visicale - Similar to Lotus 1-2-3 on PC
B15 - MicroEmacs - Text editor & S/checker
B17 - QED - Superb text editor
B18 - Textplus V3.0E - Edit crunched files!
B19 - 600 Business Letters - Brilliant
B21 - BBase II - Easy to use database
B22 - DataBase Wiz - Name & address
B23 - Textengine V3 - Quality W/processor
B30 - AMIBASE PROFESSIONAL II
APD36 - Amos updaters V1.32
APD52 - Forms Really Unlimited
APD132 - Family History Database
APD138 - Spanish Tutor - Pretty good!
APD176 - DataBase Master V2
APD257 - Cassette Labeller - For the inlays

SLIDESHOWS & PICS

P05 - Pendle Europa Slideshow - V. Good
P09 - Sunslide II - Exceptional quality
P11/2 - Nasa Slideshows - Both 1 & 2 here
P25 - Roger Dean - Excellent slideshow
P28 - Sunslide III - Brilliant follow up
P32 - Agatron 6 - From Tobias Richter
P33 - Agatron 8 - More from TR's stable
P41 - Nemesis Prologue - From Hanibal
P47 - Joe Slideshow - Exceptional artwork
P48 - Psynopsis Slideshow - Rather brilliant
P62/3 Channel 42 & Silents - Very good
P65 - Agatron 12 - Fantastic quality
P66 - Fraxion Future Visions - Very good
P67 - Agatron 11 - Incredible standards
P76/7 - Nemesis Chapt. 1 - The next chapter
P78/8 - Laurel & Hardy - Brilliant for fans
P83 - Invisible World - Bugs n things
P85 - Robocop - By Hanibal, Unbelievable!!

P89 - Art for Arts Sake - By Hanibal, Brill
P91 - Pixelium - Absolutely superb
P93/4 - Star Trek Megademo - 1 Meg min
P95 - Rick Parks Art - Quite incredible

ANIMATIONS (most 1mb)

A06 - More Aerotoons - By Eric Schwartz
A10 - Batman - This is brilliant (by ES)
A11 - Puggs in Space - Brilliant
A12 - Probe - The most famous of all anims
A17 - Stealthy II - Excellent little animation
A19 - Star Trek Fleet Manoeuvres - Good
A20 - Agatron 26 - Dry dock
A13 - Agatron 2 - Includes F15 fighter
A48 - Busy Bee & Tree Frog - Very good
A49 - Fractal Flight - Small screen anim.
A58 - Walk - Brilliant chrome legs walking
A61 - Agatron 15 - Billiards & Lotus & F15
A62 - Stamp Collector - Brilliant sequence
A63 - Juggler II - Very, very funny. See it!
A67/8/9 - Station at Kerne - 2 Meg
A70/1/2 - Lost In Space 2 Meg
A76 - Agatron 30 - Millennium Falcon
A77 - Agatron 17 - Twok and Mensch
A78 - Agatron 24 - Kull and ping pong
A79 - Agatron 33 - Probe & bird of prey
A81/2 - Walker & A1000 - 2 Meg
A83 - Discovery Shuttle - Very good
A84 - Agatron 36 - Bird flight
A87 - Car - Lotus & Unicycle, brilliant
A88 - Bunsen Burner - Brilliant 3D flight
A89 - Agatron 22 - Includes approach + more
A90 - Agatron 20 - Belle Huey Helicopter
A91 - Franklin the Fly - Needs 2 drives
A94/5 - X-Wing - Rather brilliant sequence
A96/7 - Light Cycle - From Tron and Brill!
A98/9 - Anti-Lemmings - 2 Meg
A100/1/2/3/4/5 - The Wall - Exceptional
A107/8/9/10 - The Landing - 4 Meg
A111 - Mars - Absolutely incredible, get it!
A112 - Juggette II - Another hilarious anim
A115 - Agatron 27 - Book and others
A116 - Agatron 28 - Disconnect, Beautiful
A117 - Agatron 29 - Millennium Falcon
A124 - Shuttlecock - By Eric Schwartz
A126 - Real 3D Anim - "Real Pinball"
A127 - Real 3D Anim2 - T-Pot and balls (?)

MUSIC

M01 - Sound Samples - Includes perfect sound
M04 - Vangelis - Brilliant music & graphics
M10 - Jean Michel Jarre - With good pics
M18 - Amigadeus - By Rod Baxter, Brill
M19 - Classix 1 - Mr Baxter strikes again!
M20 - Classix 2 - More of his formidable work
M35 - APD1.28 - MIDI UTILITIES
M42/3 - Soundtracker V4 - Excellent
M52/3/4/5 - Modules - Need I say more?
M58/9/60 - Metal Modules - Good
M61/2/3 - Sound samples for S/Tracker
M88 - Pendle Europa 6 - Excellent disk
M105 - Burning Independence II - Brill
M115 - Scoopex Music Utils - By the score
M131 - Deluxe Music Data - Needs DM
M134 - Kefrens Jukebox - Good
M145 - Midi Programmes
M152 - Midi Programmes - More
M165 - MED V3.2 - Latest Edition!
M169 - Chip Music - 43 tracks to hear
M172 - Audiomagic V1.1 - Brilliant utilities
M175 - Startracker - 8 track tracker (?)
M186/7/8 - Do The Bartman
M192 - Do The Bartman Re-Mix!!
M196 - Powerlords Sound Utilities
M198/9 - Vivaldi - By Rob Baxter
M201/2/3 - House Samples
M208/9 - RSI Modules Disks
M216 - Drums & Pipes - Brilliant
M223 - RSI Modules Disk 3
M225 - Audiomagic V2 - More utilities
M227 - Psynopsis Samples - Sound samples
M230 - Jean Michel Jarre Live - Brilliant

M234 - Delta Music Editor - Very good
M236/7/8 - Deep Deep Trouble - Good
M247 to M261 - Soundtracker - Instruments
M267 - Soundbarrier III - By Mark (ta)

DEJA VU (incorporating

AMOS licenceware) £3.50

LPD1 - Colouring Book - Simple for pre-school children upwards 512k
LPD2 - Arc Angel Maths - Educational games, add, subtract etc, etc 512k
LPD3 - Galeons - Very effective follow up to the Dogfight game, Excellent 1 meg
LPD5 - Jungle Bungle - Superb adventure game for kids, Icon driven 1 meg
LPD8 - Work & Play - 3 educational games for young kids. Recommended 1 meg
LPD14 - Play It Safe - Aimed at educating the young kids about safety 1 meg
LPD22 - LC10/200 Fonts - This enables you to install more fonts in your printer 512k
LPD25 - The Mission - Brilliant text adventure written in Hi Soft 1 meg
LPD27 - Flower Power - Educationally orientated for the very young 1 meg
LPD28 - BudBase I - Beautifully easy to use and extremely user-friendly, try it 512k
LPD29 - Big Top Fun - Yet another brilliant educational game from Len Tucker 1 meg
LPD30 - Shymer - Wonderful adventure game for kids, beautiful graphics 1 meg
LPD32 - Hard Drive Menu System - Superb hard drive utility, used by us! 1 meg
LPD33 - Amos Adventure Kit - This needs AMOS to enable you to create your own adventure games, excellent
LPD34 - Invoice Printer - For use by the Small Business firms 1 meg
LPD35 - T-TecDraw - Full technical drawing program. Fantastic results. 1 meg
LPD38 - Amos Art - Full of goodies for inclusion in your own AMOS creations
LPD40 - SpriteBank Editor - Bloody Superb, Need I say more? Needs AMOS
LPD41 - Rescue - Created using incentives 3D con kit and is nicely done! 1 meg
LPD45 - MUSIC BOX - The ultimate in music education for kids 1 meg
LPD46 - Maggies Clipart - Crystal clear images of clipart, categorised 512k
LPD47 - Dirty Cash - Beautifully done fruit machine simulator, excellent 1 meg
LPD49 - Marvin the Martian - A traditional maze game, for children 1 meg
LPD50 - Maggies Clipart 2 512k
LPD51 - Magical Young Artist - A colouring in type program for kids 512k
LPD52 - LC24/200 Fonts - Thought to be compatible with most printers! 512k
LPD53 - Maggies Clipart 3 512k
LPD54 - Maggies Clipart 4 512k
LPD55 - SpriteX V1.32 - An update to the earlier version and enhanced AMOS
LPD56 - C Text V1.32 - An extension to AMOS to allow you to use icon based fonts which can be drawn in up to 16 colours. Some fonts are supplied on disk. AMOS
LPD65 - Power Planner V1.0 - A combination appointment planner and name and address database with telephone numbers, runs fine on 512k
LPD68 - Virus Buster by Rod Pascoe - Very easy to use Virus Killer with intuitive user interface. Recognises all new Virii as well as the older ones. Has hard drive install programme and full documentation. 1meg
LPD69 - Magical Mix-up - By Daisy Software. Very addictive jigsaw type game, you choose how many pieces you wish to cut the picture into, from 6 to 100 512k

All Deja Vu products listed are fully A500 plus compatible!

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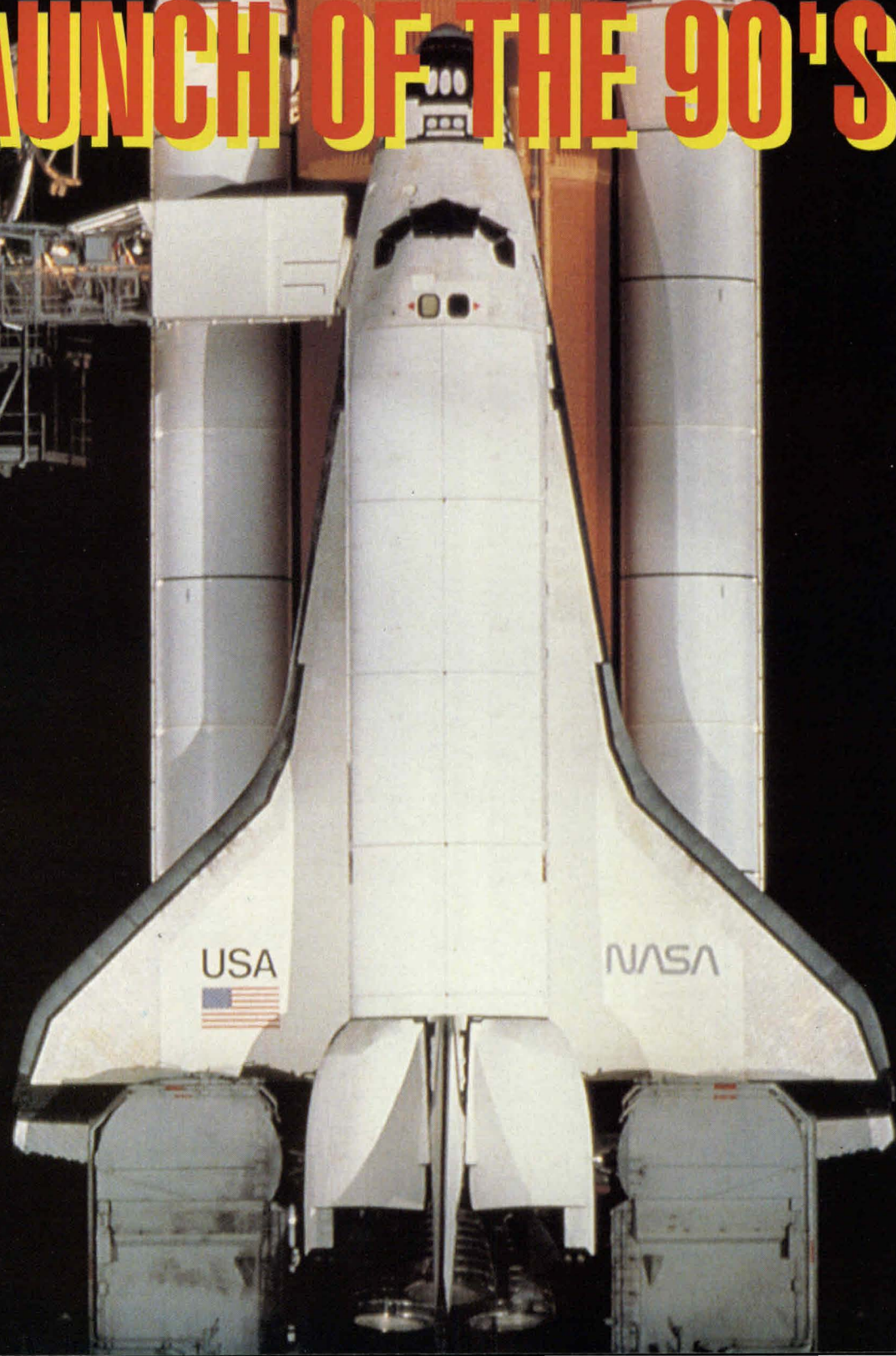
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YOU GET A FREE ONE

POSTAGE:

UK and BFPO: Please add 50p to order.
Europe: Please add 20p per disk.
World: Please add 40p per disk



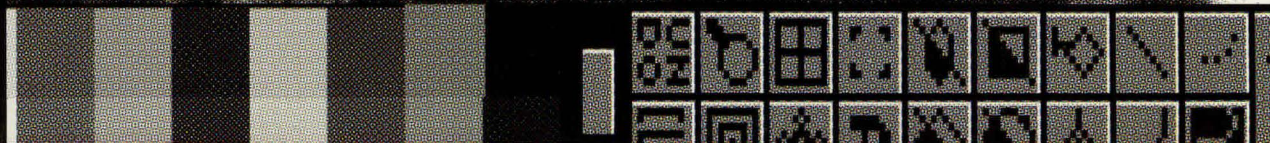
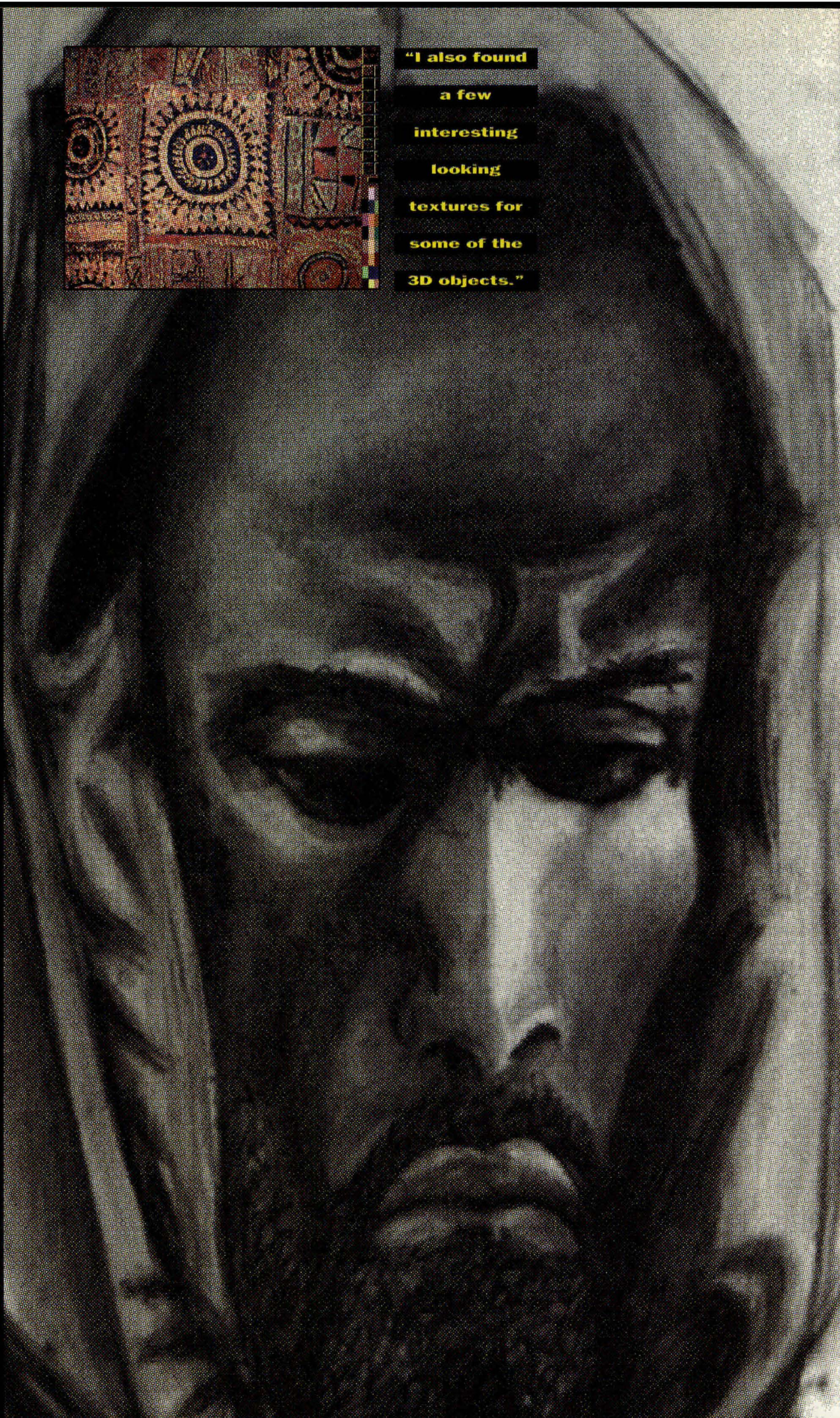
**THE COUNTDOWN HAS
STARTED FOR THE MOST
EXCITING PC MAGAZINE
LAUNCH OF THE 90'S...**



→ set up a new directory on the hard drive using Directory Opus and make sure that I have separate drawers within this, for digitisings, pictures, roughs, 3D files and FINALS. It definitely pays to be as organised as possible, when you are handling so many different types of file. It is a good idea to stick to a set of conventions for things like file names and directories. e.g. an animation might be called xxxxx.dctv.anim (a DCTV format animation) a picture might be called xxxx.hamlos (a HAM, interlace, overscan picture). ONLY final pictures and animations are called xxxxFINAL.dctv.anim. If I HAVE to re-do a final but still keep the original, I would call it xxxxFINAL2.dctv.anim. This may all seem a bit boring but it really does make a big difference. You will also need to be very familiar with the way that the Amiga DOS operates. How directories and files are organised, renamed, moved, copied, deleted and you need good file handling software such as Directory Opus or Disk Master 2.0. Using Digiview 4.0, all the photos and drawings were digitised in hi-res, just in case I need the extra resolution. I could have digitised them using DCTV digitise, but the 24bit file needed for Imagine 2.0 would slow it down and use up too much memory. In this particular case it really isn't necessary, as the final images will be mixed with light and wrapped in various ways, so destroying a lot of tiny detail. The drawings are cleaned up and saved from DPIV. The window is also imported to DPIV and more carefully redrawn, to remove imperfections and change some of the colours. Some of the textures need cutting and tiling in DPIV, to make them larger and more useful for 3D work. Next step is the creation of the three dimensional scene using Imagine 2.0. I've built the altar-end of a church from my book on British Cathedrals. Just a back wall, window, two columns, the altar and a floor. Each of the parts are given their own texture wrap (from DPIV), ranging from marble and granite to wood and tiles. The stained-glass window is the only slightly tricky object. It has to be a flat disk with a digitised window that fits exactly onto it. It also has to let light through the coloured sections. Not as difficult as I thought though. Just use Imagine's CONVERT IFF on the window brush, to create the right size of disk. Now set it's attributes as a brush wrap of the same picture and set it up as a FILTER WRAP (this makes each colour in the brush filter light through). Any black areas stay black and there you have it. Instant stained glass. Next up is the golden slab. This is a simple block with gold attributes supplied →



**"I also found
a few
interesting
looking
textures for
some of the
3D objects."**



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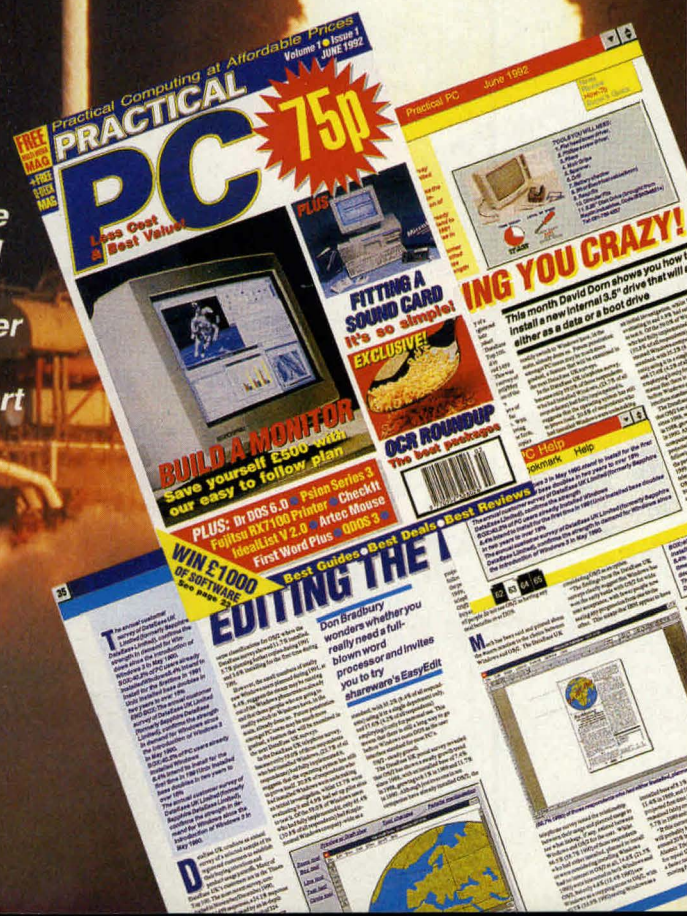
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Through its' down to earth and accessible style **PRACTICAL PC** is a quality computer magazine that genuinely puts the reader first.

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→with Imagine. The face brush is wrapped onto this using a BUMP WRAP (the flat surface is raised, depending on the amount of white in the original picture). My black and white drawing now becomes a detailed relief on the block. All of the wraps in Imagine 2.0 are placed on the objects automatically, so as to achieve what it thinks is the ideal wrap. This usually works perfectly and makes it all very painless. When the objects have all been tested using the QUICKRENDER feature, they are loaded onto the stage and the camera and lights are added.

The animation is tested in line mode and several of the key frames are fully rendered to make sure the colours and effects are right. Finally, the animation is rendered over night as a set of DCTV format pictures. To make the animation run fast enough I have the slightly painful job of loading each frame into DCTV paint and converting it to 3 bit planes instead of 4. This is DCTV's lower colour format but I really can't tell the difference. The pictures are then loaded automatically into DPIV using the 'NO OF FRAMES' option set to my frame count and the final animation saved as an anim file. All of my files and the animation can now be backed-up onto floppy using Quarterback. If I didn't do this after each project, my hard drive would fill up within a week. To dump the animation to video tape, all I do is connect a lead from the DCTV video out to my video recorder's video in. Remove the menus with F10 and hey presto, a high resolution picture in millions of colours. Press 4 and record the animation a couple of times, ready to be edited into my next video. At this point I just have to mention what an incredible piece of equipment the DCTV is. To record high-res, 24 bit animations onto tape would normally mean the purchase of an expensive board for the Amiga, a frame controller to dump the frames one by one and a frame accurate video deck. All this would cost in the region of 8000. The DCTV does this in one small box for under £500. No, the quality is not quite as good as £8000 worth but it isn't far off. I am singularly impressed.

the end bit

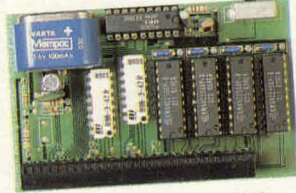
So, is this the art of the future? I certainly hope not. Well, not exclusively, that is. The computer is just another artist's tool to help free the imagination and create those illusive works of art that are floating around your head. It is a fascinating and exciting development which is inspiring, and will continue to inspire and intrigue people for centuries to come... I still love paint though. 

**"I've got this
vision of a golden
slab, a bit like a
brass rubbing with
the image of an
ancient face
engraved upon it."**



**"The animation is
tested in line
mode and several
of the key frames
are fully rendered
to make sure the
colours and
effects are right."**

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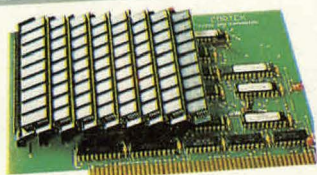
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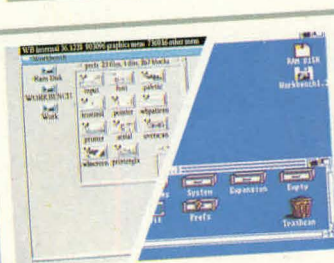


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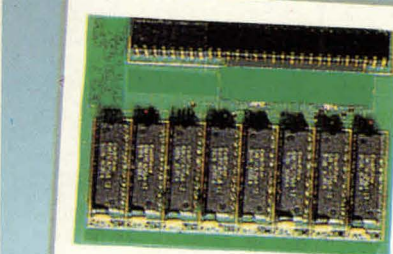
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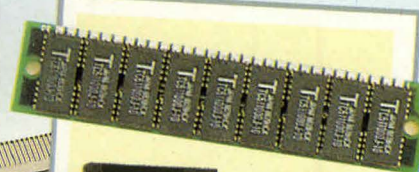
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just

imagine

I was really looking forward to the latest version of Imagine. I waited with bated breath. I tapped my fingers and I eyed the letter box in anticipation. And still I waited. And waited. And fell asleep. Got up, went to work (I brushed my teeth first of course). Came home. No post. More work. Went away for the weekend. Came back. Week of work. Away again... You get the general idea. Finally it did arrive. Fresh from the programmers at Impulse in Minneapolis. Hoorah! as they say in Blighty. And what were my first impressions? One large and well printed manual and four disks in stead of one. Imagine 2.0 comes unarchived and complete with objects, tutorial material, textures and effects. The manual very carefully and very often points out how absolutely, scorchingly vital,

under penalty of having a large and unwieldy spear with nasty spiky bits on the end inserted into your kidneys at an angle of 27 degrees it is, to READ THE MANUAL FIRST. So if you're anything like me, you'll completely ignore this and dive straight into the program. Nice new colours and a nice new 3D looking interface with trendy realistic buttons to press. It seems to do everything that the old version did in the old kind of way. A homely and reassuring start but hardly inspiring. BUT, lurking under the go-faster stripes and leopard-skin seat covers lies a brand new vehicle, which is much speedier, enables you to turn corners with a flick of your smallest digit and can also fly over obstacles and make you tea and toast in the morning. Mind you, there are a few things that it still can't

do. Right, I'm going to resort to a tiresome and tawdry list of new features and changes because I'm a boring writer with no imagination.

new 100% groovy!
biological!
rechargeable!
reverseable!

four new effects

Fireworks. Explodes any object into a cloud of pieces that can sparkle and also fall back as they tumble. Mightily impressive. Flash. Objects can be made to flash on and off. Tumble. Objects can tumble to, or from, a specific point in a fairly random fashion. Boing. You can apply elasticity to enable an object to behave automatically like a ball or lump of Plasticine.

Fireworks,

Flash and

Boing! Just a

few of the

extraordinary

graphic effects

that Barry

McCarthy

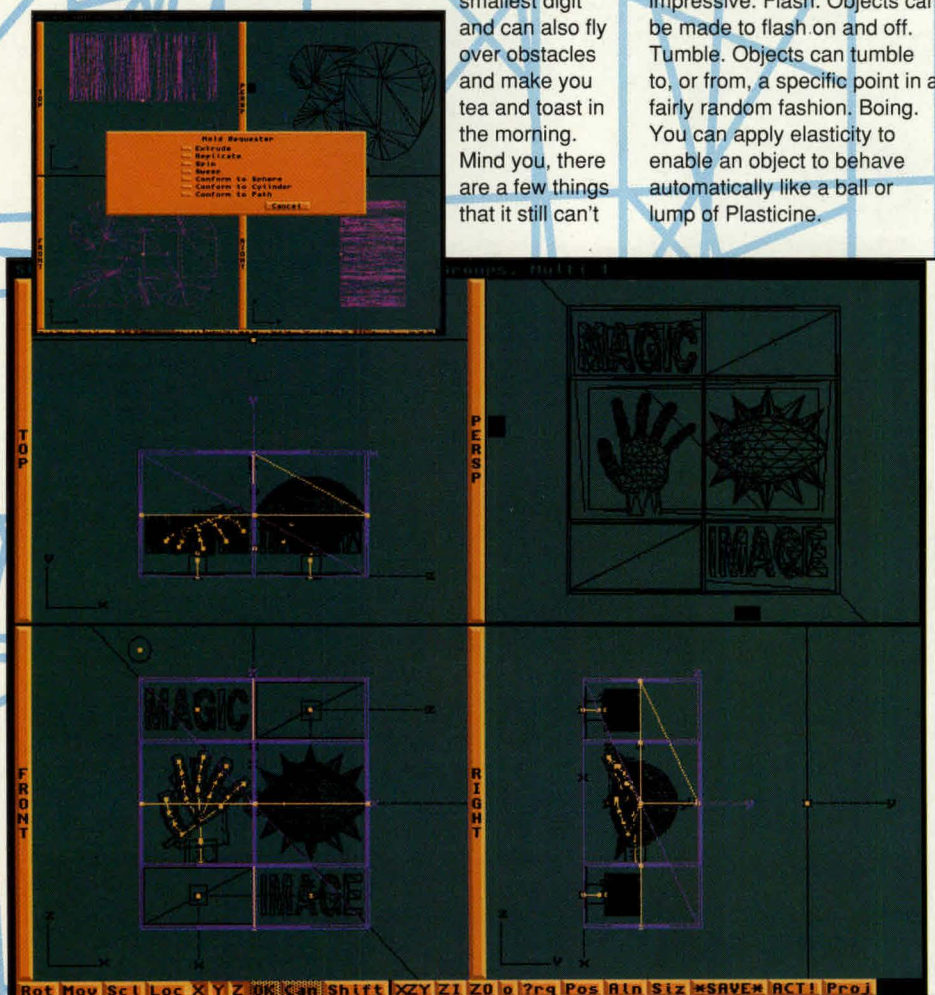
finds in

'the most

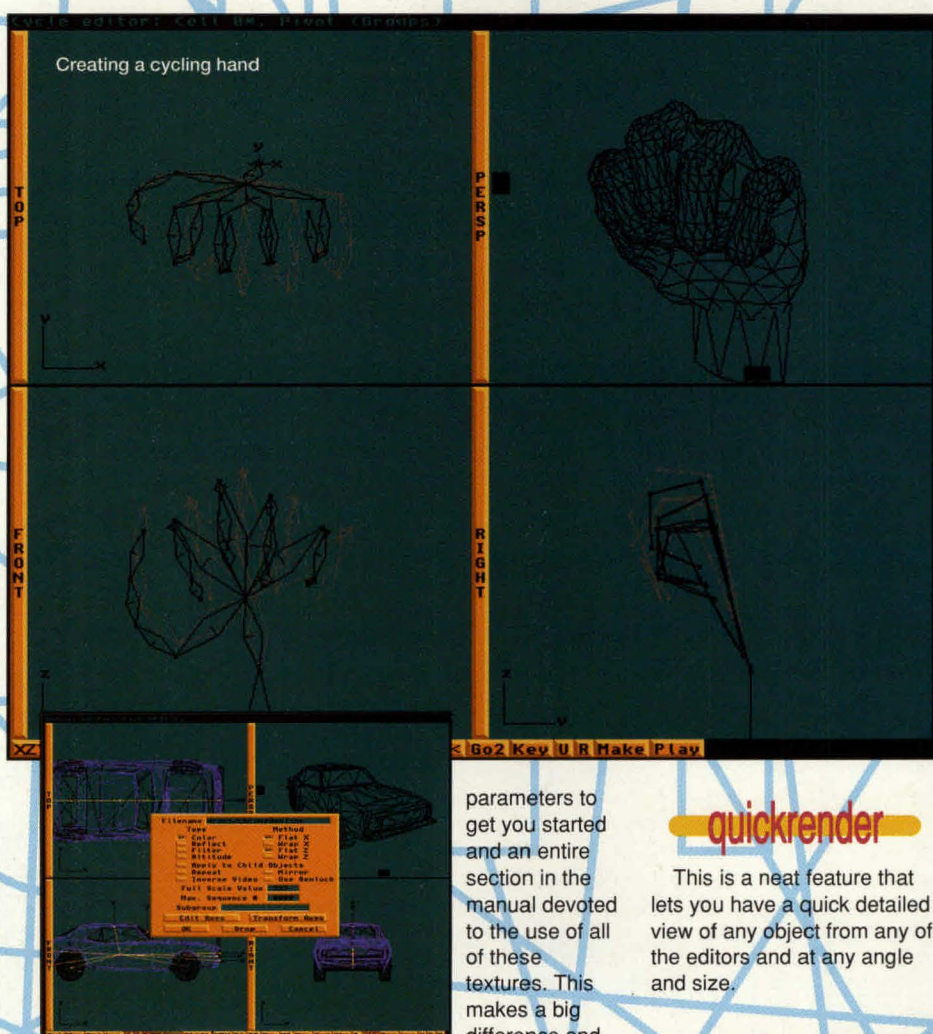
addictive

program on

the Amiga'



Imagine yourself...



is your OWN customised program. This new feature alone makes the upgrade worthwhile. It is a user's blessing and it helps to make Imagine into a USER-FRIENDLY program, which it certainly wasn't in v1.1.

the editors

As Imagine is very much a modular program, with each area of your design process given its own editor, let's look at how the editors have changed one by one.

The Stage Editor

For a start, the ACTION part of the STAGE

EDITOR is now a separate editor altogether. "The ACTION part of the STAGE EDITOR is now a separate editor altogether" (Joke). Apart from this, the stage editor has not really changed except for the addition of quickdraw options to speed up screen display.

The Action Editor

Now the 6th editor. You have the ability to have up to two special effects on any object. Imagine having a rippling pool that suddenly explodes into a thousand sparkling pieces, falling back to earth and re-forming into a bouncing ball. Easy (ish). The global settings like sky and ambient light have had a couple of interesting options added. Fog or cloud layers can be set to exist at any height. Animations can be used as back drops and/or to reflect in any reflective objects.

The Cycle Editor

Used to create animated objects like walking people, that when saved, will continue to perform their cycling

animation for as long as you like and while following any of your instructions on the stage. This now has a light-box like Deluxe Paint IV, which lets you see previous or following frames as a faint shadow. Essential for judging character movements. The cycle editor really is unique and it is wonderful (when you get used to it).

The Form Editor

This is a really difficult module to explain so I'll use an example. You want to make a fluted vase (a vase with repeating grooves that run from top to bottom all the way around, with a base and a lip at the top. A tricky object at the best of times but simplicity with the forms editor. Define a single cross-section. A circle. Pull out every other point using 4-way symmetry, to create the flutes. A star. Define the side view of the vase. That's it. Your vase is complete. It took about 20 seconds.

Every FORM is made up of a representative cross-section and a representative slice. With experimentation and practice, most basic objects can be created in the forms editor before the augmentation of detail. This is made even more powerful

new mathematical textures

The complete list is now; Angular, Bricks, Camouflage, Checks, Disturbed, Dots, Grid, Linear, Pastella, Radial, Waves, Wood, Spots. Mathematical textures are calculated textures, defined by a set of parameters that are under your control. They always render perfectly at ever resolution you are using and they are very adjustable. I must also mention that they now come with preset

parameters that they are now more usable and more desirable. Believe me, once you get used to them they are immensely powerful and very impressive. Take waves for instance. This produces the effect of a wavy surface but it can be any colour and it can also be animated in any direction. Cool!

new rendering

The DCTV is now directly catered for, with its own button and display dimensions. No HAM-E though.

quickrender

This is a neat feature that lets you have a quick detailed view of any object from any of the editors and at any angle and size.

preferences

At last. All of the start-up settings like grid and interlace and the colours, can be set and saved from within the program. This is only the tip of the iceberg though. Imagine 2.0 now has a set of icons for some of the more oft-used tools in each editor. BUT. And this is the groovy bit. The choice of the buttons and their functions are up to you. Just go to preferences from any editor and pull down any function that you would like as an icon and hey presto, hence forth, it

The effects are a truly stunning and enjoyable part of Imagine. They help to put it way ahead of any other Amiga 3D program.

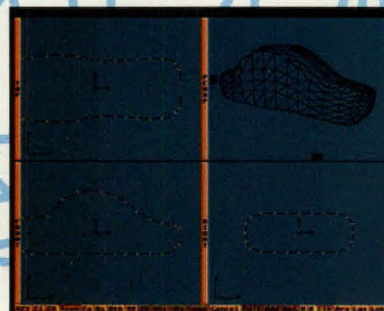
→ and useful by the addition of user-defined key-sections. Forms can now have as many key slices or cross-sections as you wish. Think of a car or aircraft that has a set of main formers covered by a skin.

The Detail Editor

The detail editor is the real business end of Imagine. It is where you design the actors and your set and where you define all of the objects' attributes like colour, texture, transparency, reflectivity, roughness, colour maps, altitude maps, reflectance maps, transparency maps, animation wraps,... Endless effects and possibilities. I must just mention the fact that you are allowed to apply up to 4 textures and up to 4 wraps of any type, including animation wraps. On top of this, your objects can be transparent, reflective, give out light and be made of fog. This is where a lot of the changes in version 2.0 have really made a difference.

The detail editor benefits a great deal from the new user-interfaces, with its many functions and tools. Rotation, move and scaling data is shown on screen as you make adjustments. There is a new Mold command. Conform to Path. This enables you to bend an object to a path of your design, providing you with unlimited bending possibilities. An object can now have selective Phong shading with the use of Make Smooth and Make Sharp. In effect this means that you can, for instance, apply Phong shading to some 3D text to smooth it out as much as possible but still give the edges of the letters a nice sharp finish. Most useful. You are given the opportunity to convert IFF images and Fonts into 3D objects or outlines. This works really well, with no hitches at all. Objects can now have a random colour which means that each triangle is a different colour in IFF format but in 24bit, it uses the entire 16,000,000 colour palette.

As I have said, the wrapping of IFF's and textures is probably the most powerful part of Imagine but it was previously the most awkward and difficult part to use. More often than not, you would end up with something so far removed from what you intended, that there was no way of telling how to adjust it, to create what you originally wanted. Real 3D made this side of things very simple and was its main advantage over Imagine. All this has now changed. Imagine automatically sets the perfect placement of all brushes and textures according to the size and shape of the object and the type of wrapping being used. Bliss. Altitude (or Bump) mapping now works faultlessly. Any map can be video inverted (made



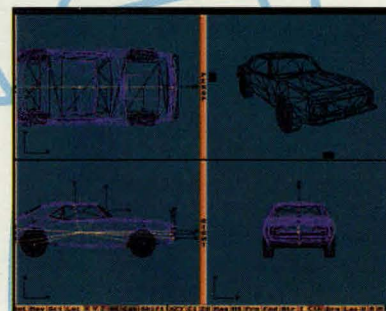
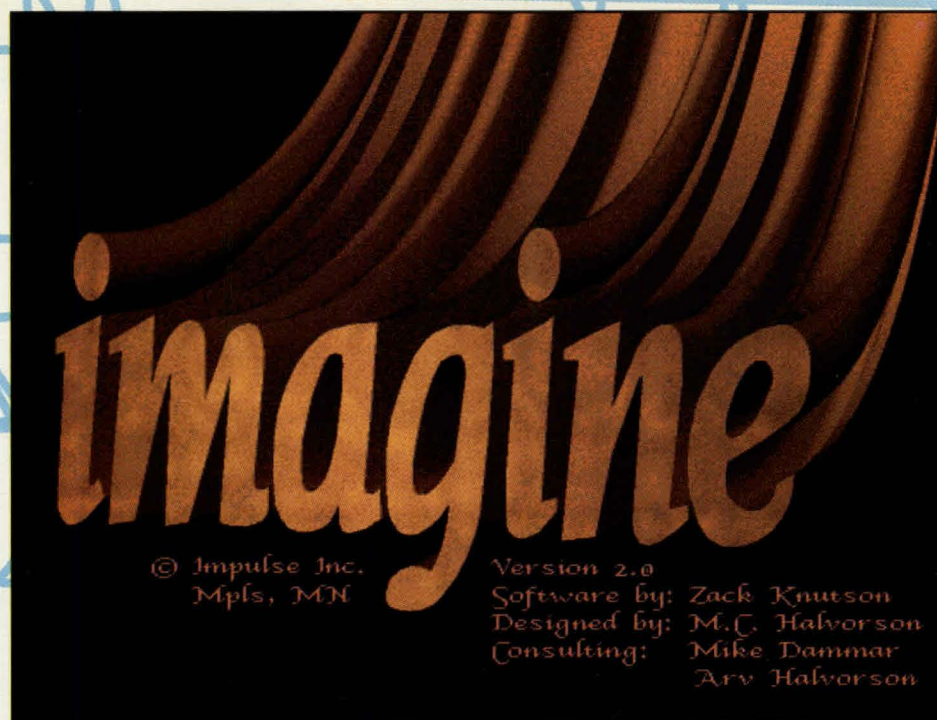
Forms editor creating a car

negative). Maps can be mirrored and repeated. Groups of objects can have wrapping selectively applied so as to effect any or all parts of the group in the same way.

the manual

I must mention the new manual, because it has been totally re-written from cover to cover for this version. Just like the program itself, it approaches the job from a unique and original direction. While everyone else drives a four wheel car on the left hand side of the road, this manual drives a Sherman tank across the countryside. They all get there in the end but this is a much more interesting and scenic route. The manual is

basically one huge tutorial that takes you through the entire program, using virtually everything. It is well written and helpful and reads a bit like a friendly social worker talking you through a rather personal problem. It is all very understandable and friendly BUT it does have a few problems. If you are a first time



Imagine user. Fine. But if you are already a user of Imagine and all you need is a reference section, life can be painful. It's like trying to find a particularly exciting bit in a story that you remember reading a few days ago. The index is not at the end and I'm sorry but every single word I looked up

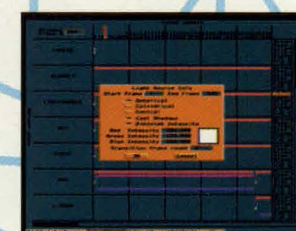
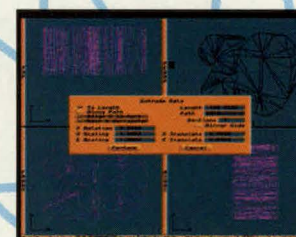
in it, was conspicuous by its absence. I really feel that the index could do with re-writing. Overall though, it's a vast improvement over the previous effort and it does succeed to teach the first time 3D animator or Imagine user in a very useful way. One of the most constructive manuals I've seen.

conclusion

Imagine 2.0 is very pleasant indeed. It's cuddly, cute and friendly and it gets my vote for the most addictive program on the Amiga.

It's got that awful "Oh, what if I..." and "What about..." "I wonder if..." "Wow!...what's that?" quality about it. This means that once you're hooked, you don't realise how many hours, days or even weeks you end up spending

on it and suddenly it's 1992 not 1991! The overall effect of the upgrade is more of a re-think and re-write. The programmers seem to have taken all the rusty bits, made them out of chrome and buffed them with a fine shammy. Imagine is now very user-friendly for such a complex piece of software and is a real pleasure to wield. Nearly everything works exactly as you would expect it to and if it doesn't, then the manual will usually help you out (somewhere). I can honestly say that Imagine 2.0 is truly the king of all Amiga 3D animation programs. User-friendly. Unlimited modelling capability. Amazing effects and surface qualities. Complex and highly advanced



animation. Nearly all output formats catered for. One of the cheapest 3D programs on the market. This is a bargain.



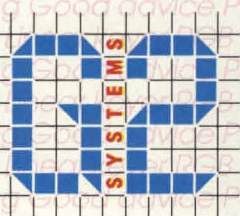
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"That Which Comes Next"

ASDG

still



Perry Kivolowitz - back row: 4th from left



MADE IN THE USA

is an intriguing

title for a

mysterious

potential

field report

polishing the product from the image

ASDG, the

creators of the

highly-acclaimed

Ad Pro- For this

exclusive

interview, Mike

Nelson plied

Perry Kivolowitz,

ASDG's boss,

with Guinness

and persuaded

him to reveal his

secrets.

There are very few programs running on the Amiga which allow you say "That can't be at least equalled on a PC or MAC", but The Art Department Professional, better known by the abbreviation ADPro, is one of them. For those of you unfamiliar with this product, it is one of the finest image processing programs on any computer, and it broke new ground on the Amiga with its friendly interface and modular design making upgrades easy to install. ADPro has three types of modules called loaders, savers and operators. The first two provide for converting graphics files between a number of widely different formats such as IFF and Postscript, and PC or Mac "standards" such as PCX and TIFF. Operators are true image processing tools which allow you to do a number of things to a picture like alter its brightness, colours or resolution. It can also control high resolution scanners. ADPro was first released just over a year ago, but the company responsible goes right back to the very birth of the Amiga itself. I visited ASDG at their headquarters in Madison, Wisconsin, last year, and renewed my acquaintance with the founder, Perry Kivolowitz, at the recent AMIExpo in Long Beach, California. I wanted to suss out exactly what was happening in one of the foremost Amiga developers' world, and first we talked about the history of ASDG.

From the A1000

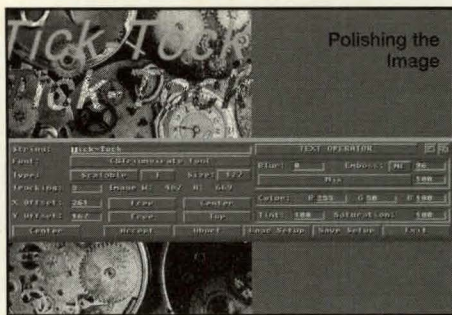
"We saw the Amiga around the time of its launch in 1985

and thought this was something we could work with - it had a number of distinct advantages over the other platforms of the time, particularly in terms of graphics and multi-tasking". The original name for the company was Advanced Systems Design Group, but that was a bit too long to fit onto awards plaques so the initials were used. It is also very convenient to type as the letters are all located together! ASDG was born and within six months of the Amiga A1000 hitting the streets the fledgling company had produced their first product, but all was not plain sailing as Perry himself points out:

"We brought out the first memory board for the A1000 - it didn't do very well for a number of reasons. The design of the machine meant we had to build an external cage to house the board and this was expensive - we had to virtually give away the cage in order to sell any memory! Also, a guy called Ronald Reagan stepped in to personally try and put us out of business by slapping an unnecessary tariff on Japanese RAM chips. American manufacturers couldn't match their quality and our whole business relied on selling these boards - we only just survived!" ASDG moved to a different area, namely industrial controllers but again this met with little significant success, although Perry admits he doesn't really see why as the market should be massive. "Amigas are ideal for this sort of thing with great graphics and multi-tasking. Have you any idea how many hoops a PC programmer has to jump through in order to control more than one thing? The trouble is

there are 40 million of them, and 3 million of us!" Throughout the late 1980s, the Amiga was developing slowly but surely with newer, more expandable models and third party accelerators like the CSA Mega Midget Racer and GVP's equipment were adding extra horsepower. This suited ASDG down to the ground and they moved into the software scene with products such as The Art Department (TAD), the ancestor of ADPro. Another of their famous products, particularly popular among fellow programmers, is CygnusED - the all-singing and dancing text edit or which is blisteringly fast and fully-featured. They are still well and truly ensconced in the hardware scene, making the Ethernet boards which allow A3000s controlling Virtual Reality machines to communicate. These fine products, however, almost pale into insignificance in comparison with the impact of ADPro.

Even the first release of ADPro showed that something special was going on, but subsequent upgrades have really started to force the Amiga down an exciting new professional path. Indeed, Perry sees the Amiga market as progressing into a two-tier environment, in which there is a divergence ranging between games players and professional users, and he is in no doubt that the latter market is financially viable, with the right products: "The Amiga is basically a low cost, but powerful platform with very inexpensive software; such machines traditionally benefit from recessions and hard times. Sales of ADPro are still ramping upwards every



month - we have months now when we gross more than we used to in an entire year. That could either mean we're doing real well, or we used to have awful years!". We will be featuring a full review of ADPro 2.1, but Perry was so eager to tell me about some of the new features that I have to pass them on for AUI readers to find out about them first. In Perry's own words, ADPro 2.1 is: "a much faster, stronger and more stable product with more What you see is what you get". In fact, this was the original design goal for the upgrade, but work is progressing at such a rate in Madison, that a pile of new features were added. We told you about JPEG and the importance of this powerful image compression technique last year, but ASDG did not stop there:

"We have added the concept of time to ADPro so it can easily manipulate pictures automatically".

I was shown a video of a VistaPro background with a spinning logo rendered with the Toaster's Lightwave 3D software in the foreground. "Big deal", I thought, until Perry pointed out that these two images were NOT mixed using any video equipment at all - the compositing of the two separate animations was all done digitally using ADPro. This is very exciting as we are taking the first steps towards producing the kind of special effects seen in Terminator 2, on a humble (if slightly expanded and hideously accelerated) Amiga. How is it done, Perry? Is it ARexx? "Almost. Meet FRED, our Frame Editor, which allows you to set up and preview animations. It is done with ARexx, but this is a more friendly way of people gaining access to the animation facilities of ADPro that were always there, but just too painful to get to. You can set up lists of ARexx programs in any sequence and also do special effects." The pace of development is exhilarating, and it is almost conceivable that PAL users will never need a Toaster, if they can do every

thing it can, digitally inside their Amiga. The question of the horsepower necessary is something else which will be addressed later in this article with an exciting announcement

from Perry. For now though, we will confine ourselves to the real world and another step forward for ADPro for video. This involves the "Broadcast Limiting Operator" which goes through a standard PAL or NTSC picture and decides which pixels are "hot", or too intense and therefore blur the image, and reduces the saturation appropriately. DCTV, reviewed last month, has paved the way for this, and is itself now fully supported by ASDG and ADPro. Perry is quick to point out that the DTP operators of ADPro are "largely sufficient" and robust, so the world of video is yet another way forward. Perry is not yet satisfied that ADPro is remotely near completion. Indeed, he used the recent AMIExpo not to shift as many copies as possible, but to invite his Californian customers into the booth for comments and suggestions about the product. "We came to find out what our weak points were - we have a pretty good idea about the strengths. We were surprised to learn the importance of conversion between different formats - in many ways the easiest thing from a programming point of view. There are only a couple of hundred thousand so called standards out there. Commodore knew what they were doing in developing IFF."

How does ADPro fit in with software on other platforms? "There are a lot of programs on

We are taking the first steps towards producing the kind of special effects seen in Terminator 2, on a humble (if slightly expanded and hideously accelerated) Amiga.

other platforms that are as good, or better, at working on single pictures. Photoshop [on the Mac] is a killer program, and Studio 32 is a great paint package. For manipulating a single picture, ADPro is pretty good, but for manipulating hundreds of files, nobody that we're aware of has something designed so well. It's the multimedia development tool of choice". I put it to him that this was down to the basic design of the Amiga's multi-tasking operating system, and in particular, ARexx. "Absolutely, there are a lot of talented people working at Commodore". I asked Perry if he thought the Amiga deserved wider coverage: "In some ways it bothers me that the Amiga

- Mother's milk! I'm always ready to trade beer for software, that's all most programming is, as long as you get the relative amounts right." I asked Perry about his opinion of the Amiga to date, and where he'd like to see it going next. "People who moan and bash Commodore really shouldn't. They have a lot of very talented people working for them on some really neat projects. I can't be specific about what is likely to happen, and when, but like everyone I'd like to see things deeper, harder, faster, cheaper and more colourful. In '85-'86 the Amiga had some wonderful advantages over other computers, and hopefully what they're working on now will

that if you look inside, so I suspect that Commodore are producing a cost-reduced design, maybe with extra features, and to avoid losing money they are waiting to make that big push. CD-I has some massive disadvantages, you know, so the competition is not a foregone conclusion by any means".

We know ADPro has a lot of mileage in it yet, but what comes next? "T.W.C.N. 'That which comes next' is the working title of our next project. The programming team has split into two distinct groups, one of which will continue with ADPro. The other has a different charter which is to clear their minds and start over in a different environment".



isn't seen as a viable machine, but then I don't really want too many people to know what we're doing at ASDG until we have a lead. Then we'll be ready to take them on in their own market place". ADPro is a very powerful program, but it is one which is still evolving at speed. Perry remains excited about the pile of work remaining on the project:

"There is still no light that we can see at the end of its tunnel". There are now 14 people working at ASDG, a high proportion of whom are programmers. Perry is, however, on the lookout for two more to join the team. "I would love to hire some English programmers. I think they are super talented and their work is under-exposed. I am sufficiently confident in my abilities as a team leader to be able to fine tune their skills into a more system-orientated approach, writing good, legal code that works first time.

We have a great environment at ASDG, we've just introduced profit sharing, a retirement plan, and dental benefits. Happy teeth make happy programmers! Maybe one day I could open up a British ASDG - I really like your beer, especially Guinness stout

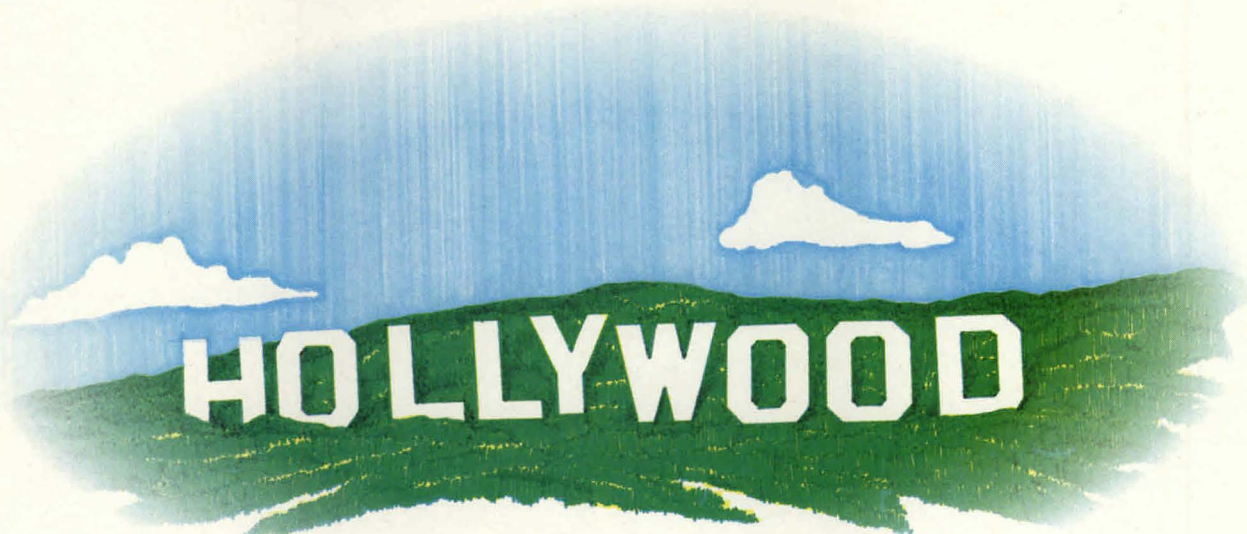
restore those advantages. There's a much more mature, experienced set of developers out here ready to exploit the hardware than in 1985, so people can look forward to some pretty neat things, and the sooner the better, as long as it isn't 1995 before something happens." "Commodore do work in mysterious ways, and some of their marketing decisions are hard to rationalise. Raising the price of the 2000 recently in the U.S.A., was probably their attempt to sell more A3000s and that's a fine machine. Sure they have a high turnover of staff, but nowadays people do move around. They always seem to attract very clever people like Chris Green (from Sublogic) who's working on graphics and Allen Havemose from Europe. I don't know of any company (except ASDG!) where everything's perfect. It's a worker's right to go out to lunch with his fellows and bitch about the company. That's why I always eat with my staff!".

What about CDTV? "It's not doing anything over here. I think it's akin to the A1000 situation. When it came out the inside was virtually hand built and so was very expensive. CDTV is just like

Does that mean they're boldly going where no-one has gone before? "Very much so. Think in terms of Time, Space, The Universe. Everything!" What, you're building a TARDIS?

"Ha! Not quite, it's a multimedia development environment. Look at ADPro - it's going vertically, bigger and better. We're thinking about a smaller, simpler machine that branches out like an amoeba and kind of senses the environment you're working in. Ok, those were Perry's exact words, and you can make of them what you will, but it seems that ASDG are moving the frontiers of the Amiga forwards, although we've heard all these wonderful predictions about the future a zillion times before. Somehow, one gets the feeling, however, that Perry Kivolowitz, and his talented team at ASDG are more in tune with reality, be it virtual or not, than anyone, and are capable of making this intriguing project come true. Until things become clearer, we will have to be content with the definite world of ADPro and try to keep up with its developments which are more than adequate for the time period at present. Maybe that TARDIS will change the situation... a

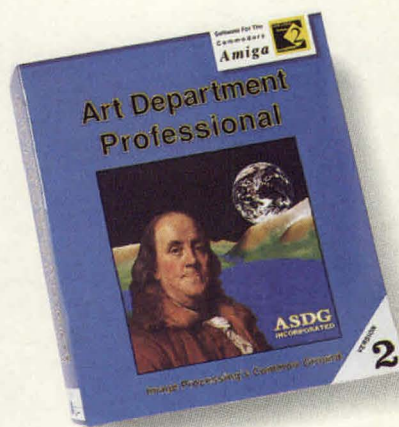
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the not so

soft

alternative

Visiting a
successful video
company in the
Midlands,

Anthony Mael

discovers an old colleague

some bright new Amiga

low price graphics

developments.

unusual name of Yuri Large preceded Andy Eskelson is the post of responder to the sacks of readers' queries in the newly launched Amiga User International magazine. Mr Large became too busy with other things and departed the pages of this publication and it was not until recently that we heard

Alternative. When I made a visit to Leicester I found out what The Soft Alternative was. A video company called Alternative Image had become so well-known, especially in the Amiga field, through its association with products such as Real 3D and Imagine that it had set up a special group, cleverly

He is also, having

possessed an

Amiga since it

arrived as the

A1000, a

passionate

devotee of your

and my favourite

computer.



Henry Burrows, Alternative
Image video producer and
Amiga fan.

The software products they

are creating are the result

of the best kind of testing -

use and development in

everyday action by

themselves.

named The Soft Alternative, to offer a service to Amiga owners who wanted expert hardware and software solutions that they could not find elsewhere. They were also extending that service to others who were interested in becoming Amiga users, notably in the area of professional graphics and video. It was a pleasant surprise to find that Yuri Large had

resurfaced but the man I had gone to see was the main Amiga video player in the company, Henry Bujko.

No Manual

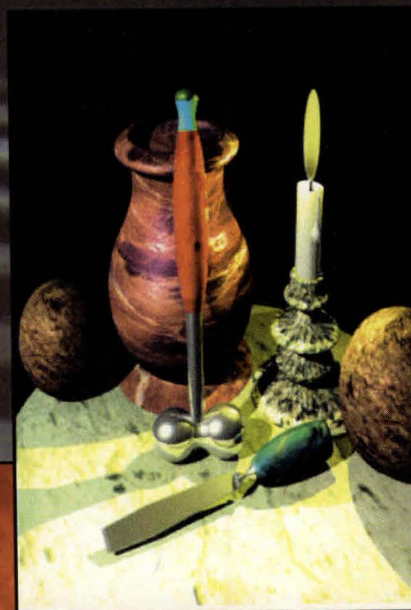
Alternative Image may already be a familiar name to AUI readers because just a year ago the very first disk that was put on the cover of AUI was a demonstration

version of Alternative Image's excellent titling program, The Big Alternative Scroller. That program has been a considerable success as the dominant titling program at the lower priced end of the market. Version 1, the one demoed on the AUI Coverdisk, was marketed without documentation but with the amusing and confident warning "This

software does not require a manual - it's that simple!" Now Alternative Image are planning to launch an upgrade with, Henry Bujko told me delightedly, a whole bunch of new features. But probably it won't need a manual either!

Bujko is a tall, articulate video enthusiast. He is also, having possessed an Amiga since it arrived as the A1000, a passionate devotee

of your and my favourite computer, which he believes is a tremendous aid to creativity. He is the proud owner of an M.A in Information Design, a qualification which took him to London to work in video." A lot of my contemporaries are now Heads of Design." He commented without a trace of envy. There he became involved in a wide range of video



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→ projects for such companies as ICL and Mars. His experience in graphic design led him to become a video producer and from there to computer graphics. When he returned to Leicester, he helped set up Alternative Image as a multi-talented resource.

Textures

"We've always been a creative outfit." He told me. "We're very flexible. For example, I'm quite happy to work to a storyboard if they've got one. If not I'll give them an idea myself." He showed me the set up Alternative Image uses to create videos for their impressive list of clients. They use the G2 VD2001 Genlock. "It's very good...you can grab excellently with it. It does its job very well in the professional environment." They have a 100 meg hard drive plus a 200 Meg Syquest drive and an 88 Meg cartridge. "We fill it all up regularly every week..." Bujko has a mere 9 megs in his Amiga 2000. "I need it when I'm using programs like Real 3D

There was one

particularly

stunning face that

appeared to be

slowly forcing its

way through

marble.



especially when I may have 5 to 6 megs in textures." Textures.. the word seems to light Bujko up. Alternative Image have been developing a new software package that has come from its involvement with Real 3D as both users and distributors. The new package is called Alternative 3D Textures. A collection of natural textures of the most extraordinarily realistic character, it come from their own needs in creating professional level video using graphic programs like Real 3D and Imagine. There are, in the initial package - initial for there will surely be follow ups - 12 different texture bitmaps supplied in 24 bit, also in HAM, 8 colour hi-res and, as the icing on the cake, 8 colour grey scale. Included on the Volume 1 are sample scenes for Real 3D which have among them the infamous - as Bujko calls them - Real 3D bumpmaps.

The textures that he showed me were truly impressive, encompassing an outstanding reality. Alternative Image had already used them to great effect in videos in the showreel that Bujko ran for me. There was one particularly stunning face that appeared to be slowly forcing its way through marble. Ideal for late night

horror movies...

The price for this interesting graphics gem? A giveaway £40.00. Certainly if anyone is using Real 3D for anything like professional purposes Alternative Image's texture package would look to be a must.

No Rip Off

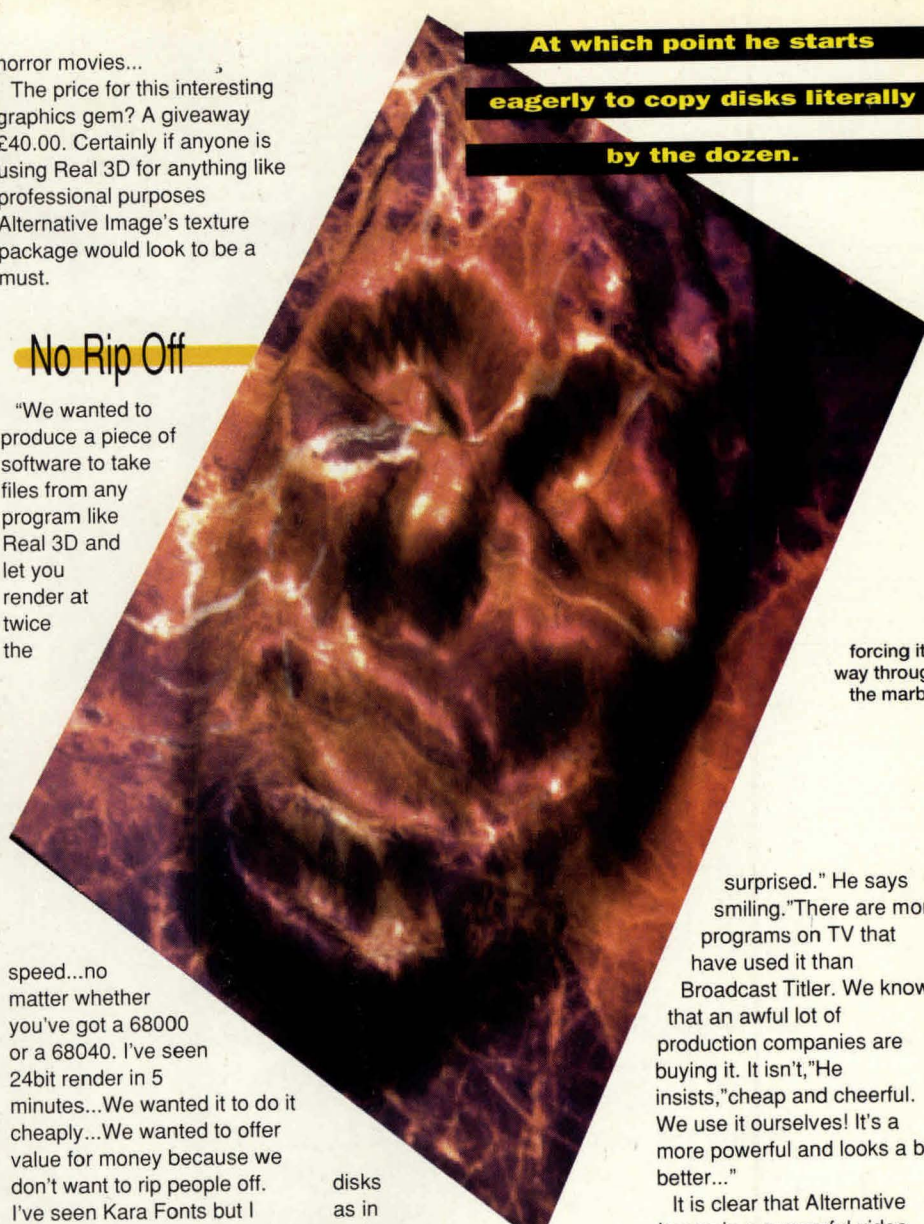
"We wanted to produce a piece of software to take files from any program like Real 3D and let you render at twice the

speed...no matter whether you've got a 68000 or a 68040. I've seen 24bit render in 5 minutes...We wanted it to do it cheaply...We wanted to offer value for money because we don't want to rip people off. I've seen Kara Fonts but I don't think much of them... We believe the only comparable package is Texture City and that costs about £200!" He finishes triumphantly. At present it seems that the new package is to be as rich in

At which point he starts

eagerly to copy disks literally

by the dozen.



forcing it's way through the marble

surprised." He says smiling. "There are more programs on TV that have used it than Broadcast Titrer. We know that an awful lot of production companies are buying it. It isn't," He insists, "cheap and cheerful. We use it ourselves! It's a more powerful and looks a bit better..."

It is clear that Alternative Image is a successful video company and the software products they are creating are the result of the best kind of testing - use and development in everyday action by themselves. The proof of this particular pudding is certainly in the eating, they are making excellent videos not only employing the Amigas of which they are so fond but using software that is well within the price range of any Amiga user. As I leave, weighed down by 17 disks, several videos and some documentation - "We do that ourselves too on DTP!" - I think about the meaning of technology of the Amiga kind. It brings professional standard capability down to consumer level opportunity and price. It lets you spend not too much cash but gives you top class results. Not cheap and cheerful, but cheap and good may be the aim of Alternative Image in producing its software but it is no accident that such software is produced for the Amiga, a computer that fits the same description pretty neatly too. **a**

disks as in textures - one image per disk. So 12 disks will load you do wn if you get it.. At this point, Bujko takes time out to nail the computer magazines. "I never understand why the magazines always use the same images when we supply them with some terrific new ones..."

I tell him that there will certainly be some fresh images in AUI if he gives me them at which point he starts eagerly to copy disks literally by the dozen. By the time I leave there are 17 to go...

BAS II

Bujko is also involved in the development the new version of The Big Alternative Scroller. This time they are working on the possibility of hard disk installation which the earlier version lacked. And the little matter of AmigaDos... With a cost around the £55 mark, Bujko maintains that it will be of comparable value to the top of the range product, Broadcast Titrer. "You'd be

Impressive textures such as the real 3D bumpmaps



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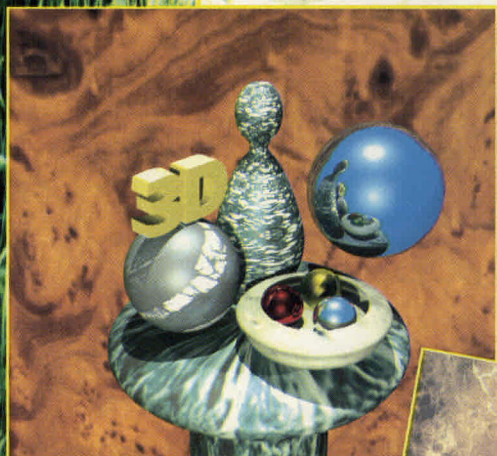
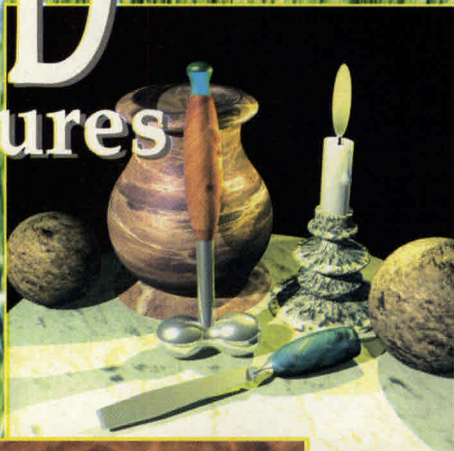
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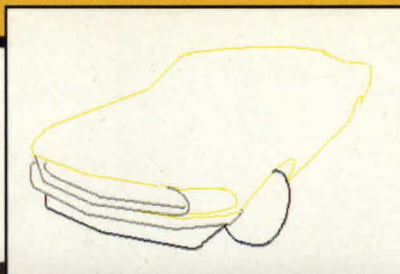
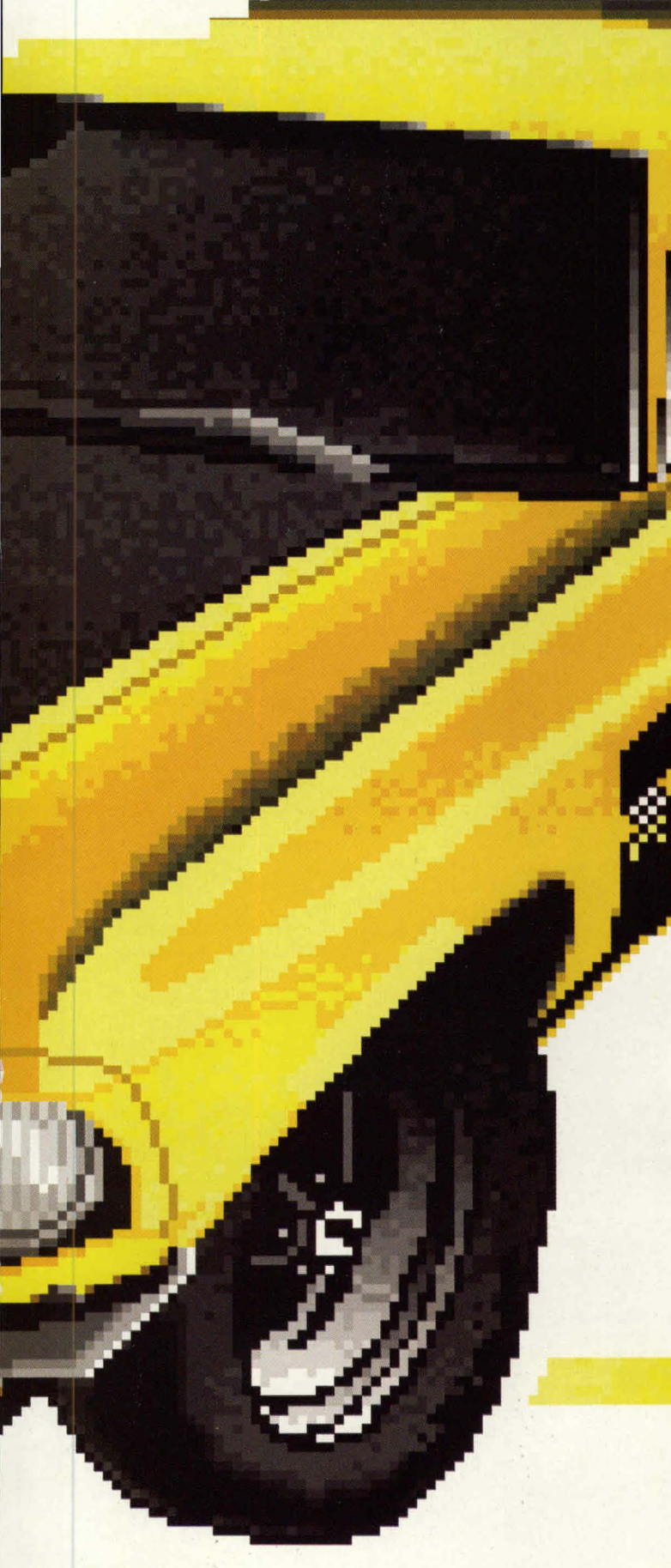
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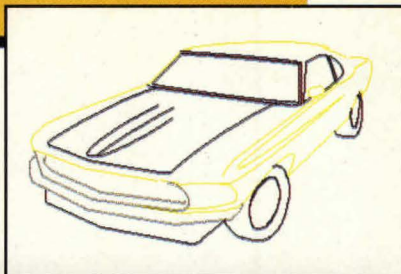
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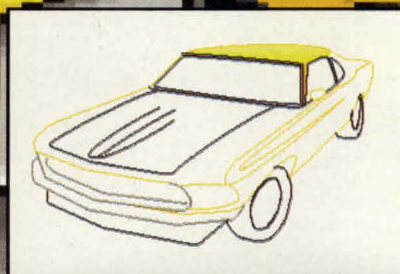
- a guided tour



1 The original print is taped onto the tablet in the correct position. The basic outline of the car is then traced. The scaling function was not used here.



2 With the outline complete, the detailed outlines of the windscreen and wheels are drawn in, using the colour that they will be filled in with.



3 The palette is then adjusted and the roof panel is filled with a yellow graduation, making sure that there are no leaks in the outline.



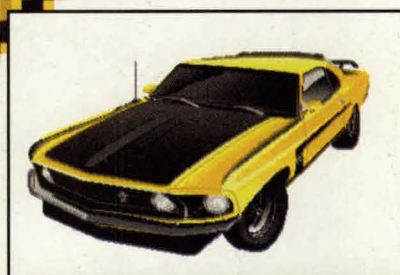
4 The graduated fills are continued, taking care to match the colours as closely to the original as possible.



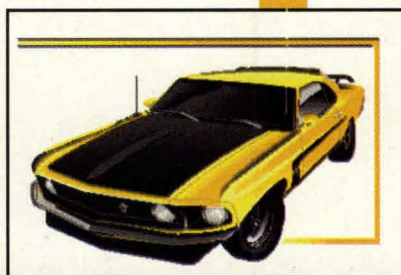
5 The aerofoil is drawn, and the front spoiler is filled. At this point I am always touching up little details, on the glass areas.



6 The wipers, door shuts and front lights are drawn in and filled.



7 The car itself is finished, by adding shading to the bumpers, and the lights. Always continue to pay attention to detail.



8 To finish the picture off, a yellow line is drawn around the car as on the original print.

Every Amiga owner, at one time or another, has copied a favourite picture using one of the various art packages available. Most budding artists have a copy of DPaint1, 2, 3, or now version 4. With a bit of patience, excellent results can be achieved using DPaint3, then if required, further enhanced with version 4. The pictures I have used are from the Scanman International Collection of Airbrushed Mustang prints, and for this exercise I have picked the bright yellow 1969 Boss 302. The images have been broken down to convenient save points,

with the final picture shown along side the original print that was copied using a Summagraphics 12" x 12" graphics tablet.

It may seem a long winded way of getting a picture on screen, as many of you will think that the image should just be digitised. But the purpose of this exercise is to show the artistic side of the computer, rather than the technical. The machine used is an Amiga 500 with 3mb, a Graphics Tablet, and DPaint3, in Low res 32 colours. Those of you with 512k or 1mb should have no trouble drawing this kind of image.

INDY HEAT

Storm £25.99

There are world championships fought out between Senna and Mansell: there's TT racing, Lombard rallies and banger races. But the real driving men are sorted from the boys in the rough tough world of Indy Heat. Here the question is not so much what you know, or even who you know, but how you can use what you know to disrupt who you know... If you followed that last sentence, you're probably ready to take in the implications of racing an incredibly fast, highly tuned car around circuits meant to be used by the clinically insane (and only then for a bet). Getting the picture? Good. Because I guarantee that, whatever you might think it's going to be like, it'll be worse.

The game is a direct descendant of the Super Sprint type of overhead viewed racing games which swarmed the arcades in the mid Eighties. You start off as an equal, racing among mad drivers with a deathwish. By winning races, you can not only continue racing (having proved yourself a worthy qualifier just by surviving), but also spend the prize money on improvements for the car. These come in the form of better engines for increased acceleration, tyres for improved roadholding, better fuel economy, more efficient brakes and turbo boosts to give you the edge in the straights. The lights start at red, then go through amber to green and you're away. Starting at the back of a four car strong grid, you have to work your way up by fair means or foul and

win the race. This is a task which is easy to start with, but gets increasingly more difficult as the game progresses. This is partly due to the other cars buying extras and improving in skill, but mostly it's to do with the more challenging race tracks. The first is a simple square, but later tracks become more and more twisty and there are less chances to build a lead (or indeed to whittle one away). As you race, you'll have to make pit stops to refuel. The pits are located near to the start line in most cases. Your colour is displayed at the bottom of the screen and a fuel bar (plus a count of your turbos) is shown. You're also warned when you're low on fuel by a pit member who holds up a board. Graphics are small but characterful. There are lots of amusing and useful details. Take for example the pits. It's possible to run over members of your opponents' pit crews to prevent them from refuelling - ingenious and a lot of fun! The scenery is detailed and pretty but you'll be too busy to care. Sound is above average but the grab factor of the game lies in the gameplay, not the presentation. There are options for up to three human players to take part, which is standard for this game type but welcome nonetheless. My only question mark hangs over the long-term interest, as I had no trouble finishing the game on my first try. Of course, I probably didn't discover all of its little secrets, nor did I get to the top of the leaderboard... not bad at all.



GATEWAY TO THE SAVAGE FRONTIER

US Gold/SSI

AD&D games have been around for some years now, appearing through US Gold's distribution chain on a regular basis. Although there have been several different types of game in the past, Gateway to the Savage Frontier returns to the traditional exploration type of roleplaying

shame, because there's obviously been a lot of work put into this product. How unfortunate that you'll need to do a lot of work to appreciate it.

GRAPHICS: 65%

SOUND: 58%

GAMEPLAY: 68%

DIFFICULTY: 6/10

OVERALL: 63%

VROOM

Ubi Soft £25.99

Nigel Mansell started his bid to beat Ayrton Senna, win the World Championship recently. How do I know? Because there have been a large amount of racing games appearing of late. Vroom is just one of them. Luckily for Ubi

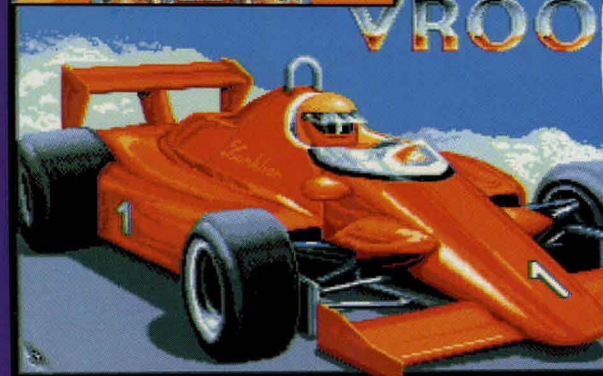
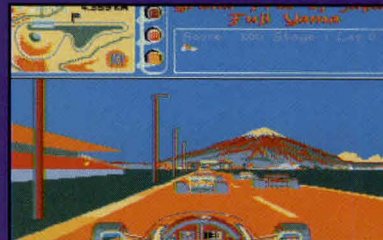
game. This type of game has been around for a long, long time and it's starting to show. It's packaged very nicely indeed, with clues interspersed among quotes for the game, arranged in a 'journal'. The idea is that when you reach a certain point of the game, it

asks you to look in the journal and read a passage. This may seem crude but at least it gets you to read the literature... Crude or not, the rest of the game feels a bit dusty and overdone. There's an attempt to make the game playable using the mouse, but in practise you're far better off with the keyboard. This slows things down a lot. Also, the menu system is far from intuitive, making you return time and time again to the same menus, often to perform similar actions for different characters. It's a

COMPILED BY ASHLEY COTTER

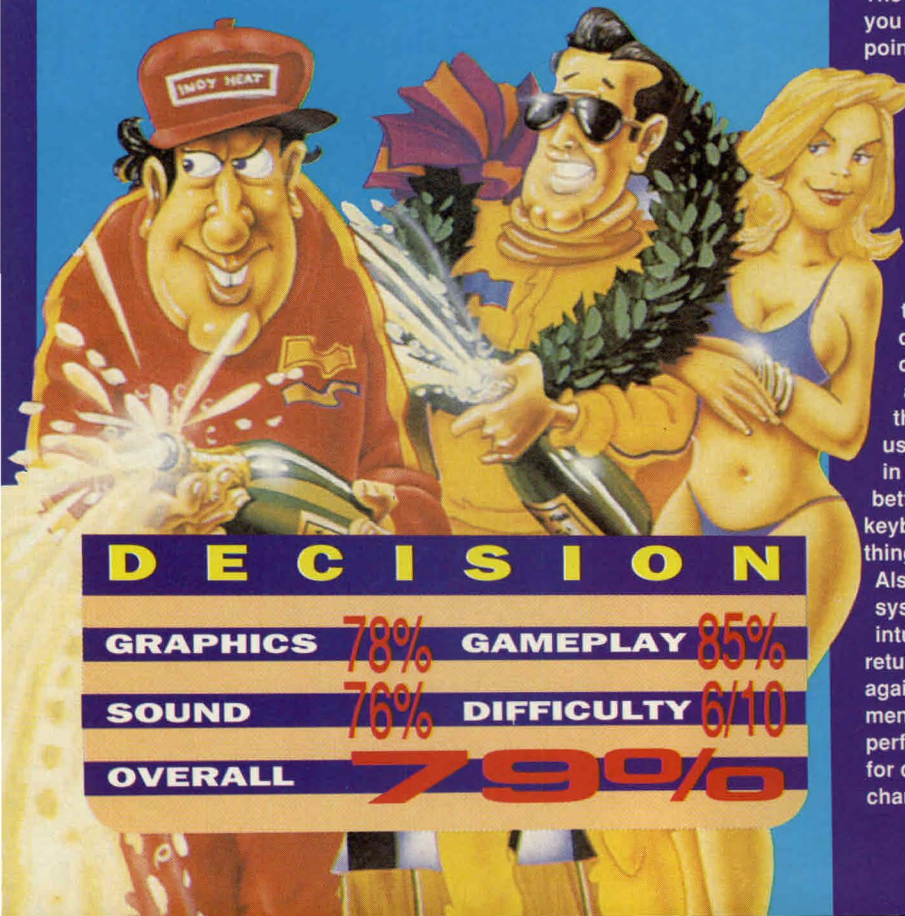


Soft, it's not bad at all. Vroom offers you a choice of two game types. There's the standard 'race to win the championship', including a qualifying lap and relevant grid placements for the fastest times. Additionally, you can test your reflexes alone and play the arcade mode. Here you have just a score. Lap times do not matter, but you must overtake a certain



DECISION

| | | | |
|----------|-----|------------|------|
| GRAPHICS | 78% | GAMEPLAY | 85% |
| SOUND | 76% | DIFFICULTY | 6/10 |
| OVERALL | 79% | | |



FIRST SAMURAI

Vivid Image/Acclaim # 25.99

DECISION

| | | | |
|----------|-----|------------|------|
| GRAPHICS | 88% | GAMEPLAY | 91% |
| SOUND | 90% | DIFFICULTY | 8/10 |
| OVERALL | 91% | | |

number of cars to qualify for the next race or it's the end of another game. Graphically, Vroom is fast and furious. You're promised smooth, high speed action and that's what you get. Sound is also very nice. Cars whine past you, fading in and out most convincingly, with some nice sounds emanating from beneath your bonnet too. I've played some far worse racing games. If you can overcome the slightly sensitive controls and master simultaneous steering and braking, Vroom may well fill that 200mph gap in your life. Don't bother if you're looking for something completely realistic - you're better off elsewhere.

| | |
|-------------|------|
| GRAPHICS: | 88% |
| SOUND: | 90% |
| GAMEPLAY: | 79% |
| DIFFICULTY: | 8/10 |
| OVERALL: | 85% |

This game marks a very bad run of luck for Vivid Image. It originally launched First Samurai under the Mirrorsoft brand. It received rave reviews and even an award - the INDIN best arcade game of the year - but Mirrorsoft went down with Robert Maxwell. The game got out into the hacker circuit. In an attempt to make something of the game, Acclaim, who snapped up Mirrorsoft's boss Peter Bilotta and most of Mirrorsoft's games too and are now Vivid Image's new label, has relaunched the title. It deserves to do well for the well-travelled innovative software company (they previously were linked with Activision where surprise, surprise, Mr Bilotta also worked), because it's as much a landmark in computer entertainment history as each of their last games have been. Why? Because, despite the pressure in the market to produce games which sell on the strength of a licence, or games which sell because of a huge advertising campaign, First Samurai is as original and well-designed as all of their games have been to date.

We're dealing with the age-old formula of platforms. But it's done in a way which should make other companies sit up and ask questions of their creative departments. Very few of the levels are identical, both in presentation and graphical content. There's the traditional left-to-right levels, the bottom to top levels and even a fight on a train. But the deeper you dig in First Samurai, the more you'll find to enjoy. Take the secret objects, for instance. Hacking around the landscape with your sword (which is a varied and mystical weapon, able to perform a variety of functions other than hacking people to bits), you'll uncover chests of hidden treasure, food parcels and secret items. The magic lamp will reveal any hidden items with a gleam and you can recover them later. I mentioned the sword. Well, you only qualify for this when you've chopped, punched, kicked and collected enough mystical energy to earn it. Having got this though, you can command it to swing mystically about your head, throw it and get it to come back, or (gasp) use it like a usual sword. The other thing you can opt to use mystical energy for is to charge up a pot. Should you choose to do this, you lose the sword for the time being. Die in action though and you can restart at the last pot charged. There's more? Yes. Superb graphics. Sound which doesn't so much hit you as batter you with excellent music and samples in the relevant places. Incredible special effects including great magical spells, death sequences and no pause between levels for the extra data to load. A winner. Let's hope piracy hasn't killed it off.

games news

Ant music

Of all my summertime experiences, being bitten by ants, tipping hot water into their nests and torturing them with a magnifying glass on hot days are among my most poignant memories. Now you can relive your happy days in the childhood nature laboratory, by playing Ocean's SimAnt. You're playing the black ants and you have the task of strengthening your colony, fighting off the challenges of the red ants, ant lions, spiders and starvation. So who said life as an ant is any different to life as a journalist? SimAnt should be available by the time you read this and expect to pay £34.99 for the privilege of being spooked.

Unlucky 13?

What did you do on Monday April 13th? If you played a computer game on your Amiga you'll have been unwittingly supporting the first National Play A Game Day. Organised by ELSPA (European Leisure Software Publishers Association), the day is supposed to be helping to promote the current boom in computer leisure. The day ties in with the second day of the Spring ECTS which also enjoys the backing of ELSPA. It's being described as "a wonderful opportunity for members of the public who know nothing about games, to find out a little more about them," by ELSPA general secretary Roger Bennett. I'm sure the public won't really need much encouragement, but it's a nice idea nonetheless. Fifty years from now, we'll be having National Kick A Video Game Addiction day...

System 3 bounces and fuzzes

I remember Silly Putty as a sort of egg-shaped plastic ball which was filled with, er, putty. This was no ordinary putty. It could stretch, so you could make shapes out of it, it could bounce if you made it into a ball again and you could even lift pictures from comics with its shiny surface. The game's described as immensely playable. The character is described as immensely pliable. Groan. Coming soon, priced



ORK

Psygnosis £25.99

There once was a game called The Killing Game Show. Set in the future, it was a shoot-em-up with a few new twists and turns that made it a little different from everything else around. Ork's like that too, with one distinction - it's different from everything else around, apart from The Killing Game Show. It's the usual Psygnosis feast for the eyes, with multi-level parallax scrolling, some great animation and moody colour schemes. Sound is well-used too, with great effects and nice music in interim scenes. Puzzles are a-plenty and of the visual variety. Each level occupies a map of many screens in size and the screen scrolls around the central character as you progress. While there's plenty of variety present, Ork doesn't

really quite warrant a massive amount of attention. It's got everything a great game should have, except that indefinable edge to set it apart from the other eight shooting/exploration games you've played recently. Nice graphics, but the game won't keep your joystick hand busy for long.

GRAPHICS: 92%
SOUND: 88%
GAMEPLAY: 74%
DIFFICULTY: 9/10
OVERALL: 78%

HARLEQUIN

Gremlin Graphics £25.99

"Probably the strangest game ever!" screams the box. I'm not sure if that's true - coming as I do from a background based in early Spectrum titles - but it certainly takes some of the best features from games old and new and incorporates them in a very playable formula.

Looking at Harlequin, one can trace the roots of Gremlin's progress down the years. Elements of earlier games like 'Thing on a Spring' crop up throughout Harlequin and it's nice to see programmers concentrating on playability instead of trying to cram X thousand more levels into a product.

Harlequin has to restore the broken heart of his homeland, Chimera. To do this he must explore and find the pieces of heart, wiping out the nastier elements along the way. It's very much a non-violent game. Harlequin fires hearts at his enemies, largely animated clocks and other inoffensive images. Parts of the landscape help out, providing springboards, icy patches, conveyor belts, slopes and swing ropes. Very addictive, very playable, great graphics and sound. Harlequin has everything you'll ever want from an arcade game. No licence tying it to unoriginal images either. Destined to be a hit.

GRAPHICS: 87%
SOUND: 75%
GAMEPLAY: 94%
DIFFICULTY: 6/10
OVERALL: 92%



ULTIMA VI - THE FALSE PROPHET

Mindscape £29.99

Ultima has been going for over 10 years now and I bet the creator is happy. It's another example of a genre that has really seen its day by now, but while some people have still not managed to make their games playable or allowed them to advance, Ultima games have become more and

this world - except maybe a few extra pounds - and Origin has managed to answer that in Ultima VII. It's a shame VI had to stick to the old-fashioned ways so strictly. Still, fans of the games will not feel cheated.

GRAPHICS: 76%
SOUND: 64%
GAMEPLAY: 75%
DIFFICULTY: 7/10
OVERALL: 78%



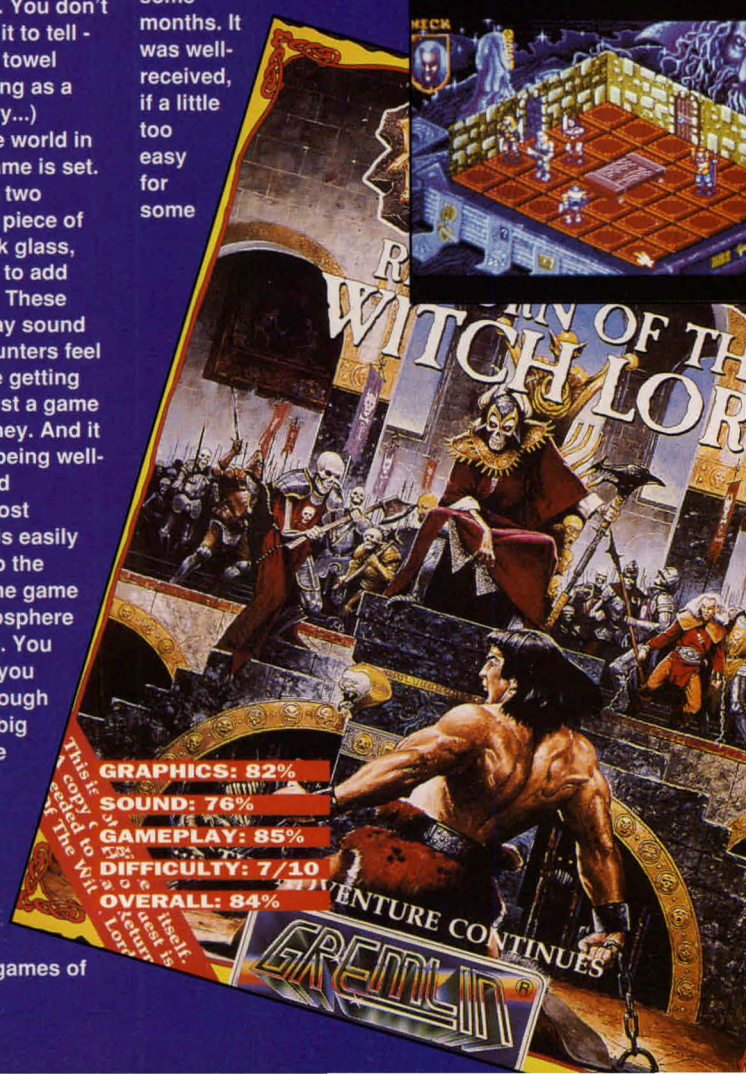
more modern and user-friendly. Indeed, the PC version of Ultima VII has abandoned the traditional appearance altogether. It should appear on the Amiga next year, with luck. But what of The False Prophet? Well, it's certainly big. You don't have to play it to tell - there's a tea towel (masquerading as a cloth tapestry...) depicting the world in which the game is set. You also get two books and a piece of opaque black glass, presumably to add atmosphere. These additions may sound trivial, but punters feel as if they are getting more than just a game for their money. And it is playable, being well-designed and attractive. Most information is easily accessible to the player and the game creates atmosphere at every turn. You do get what you pay for. Although the game is big and there are extras in the box, there's very little dividing the Ultimas from the other big roleplaying games of

tastes. Well, Return of the Witch Lord answers all of the criticisms levelled at its predecessor - and as a bonus, you get the original dungeons to play through as well. The game's presented just like the boardgame, with three quarter perspective depicting the squares of the board, monsters, treasure and characters. Combat, movement, treasure, secret doors and trap outcomes are all dealt with by chance, using simulated dice or cards. Of course, Ami does all of the rolling, leaving the one to four players to choose the actions of the Fighter, Dwarf, Elf or Magician. The sequel certainly is tough enough to keep you occupied for many a long hour and unless you've got data disks from the original, you'll need to play through the first set of dungeons to gain power. Pretty to look at and fun to play, but once completed you'll probably never come back.

HEROQUEST - RETURN OF THE WITCH LORD

Gremlin Graphics £29.99

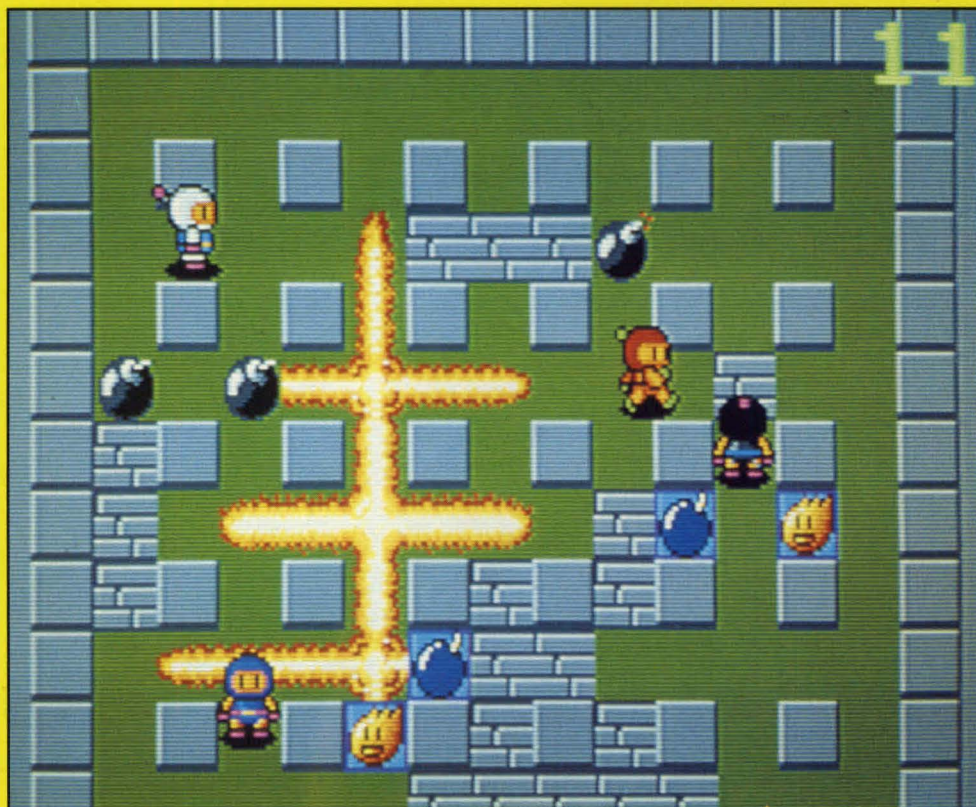
Computer Heroquest first appeared some 12 months ago, riding the wave of boardgame success which made it a household name for some months. It was well-received, if a little too easy for some



GRAPHICS: 82%
SOUND: 76%
GAMEPLAY: 85%
DIFFICULTY: 7/10
OVERALL: 84%

DYNOBLASTER

Ubi soft £30.99



What's the answer to the problems of theft, sorehead behaviour and disillusionment? It could well be Dynoblaster, with its unique five-player option (bye-bye anti-social people), which doubles as a software protection due to the multi-joystick interface (piracy is theft, after all) and is extremely playable and therefore good value for money (no more disillusioned games buyers). Before Ubi Soft goes looking for the Nobel peace prize, is there nothing bad to say about Dynoblaster? Well, it is a bit violent... The idea of the game is this: you've got to be the last thing alive on screen. Simple. All you have to do is to remove the competition by blowing them into little pieces. As with most attempts to blow people up, bombs are employed to perform this somewhat fundamental aspect of the game. No Semtex or TNT; these bombs are the traditional 'fizzling fuse' ball types seen in cartoons. In fact the whole game has a cartoon-like feel to it, from the attract modes at the start of the game to the in-game graphics. The game looks very much like many of the older

arcade slot machines. There's a view of a maze from above, with pathways formed by two types of wall. One type is indestructible and may be used to hide from explosions, while the other acts as both destructible blocks and hiding places for the various bonuses to collect. Ducking and diving are the main skills needed, although this game is not just a mindless attempt to blow people apart. You're going to have to think ahead or you will end up trapping yourself and dying a horrible death. You start pinned in a small corner of the screen and have to blow your way out. As your bombs rattle holes in the walls, items often appear. These can add extra bombs to your arsenal, letting you drop more than one at once (and increasing the danger to yourself as well as to your opponents), increase the area of effect when a bomb explodes, allow you to remotely detonate a bomb or gain extra lives. Get hit by an enemy bomb - or by one of the wandering monsters which patrol levels - and you're out of the round. Last one alive wins a cup and the overall winner is decided by the number of cups won (up to a maximum of five). Things get more complicated. If you've got enough trouble on your own (and there are 64 solo levels to play through), multiply that by the number of people playing. The joystick adapter plugs into the serial port and the first player must use a port on this adapter - thus preventing piracy. Nice. It certainly gets very hectic with more players and the nice thing about the game is that it's easy to pick up. First time players will have no problem after a few minutes. It's fun, frantic and looks pretty good. Most of all it's addictive, which counts for a lot these days. A very good release by a company that's often under-rated. Worth buying if you've got friends who hate watching you play through games while waiting for their turn. I'd like to see Ubi Soft release more games which utilise the adapter though, to further justify the extra fiver the game costs.

DECISION

| | |
|------------|------|
| GRAPHICS | 75% |
| SOUND | 80% |
| GAMEPLAY | 86% |
| DIFFICULTY | 4/10 |
| OVERALL | 86% |

games
news
continued



Silly putty

£25.99. There's more news from System 3. Myth, a game hailed by many as one of the all-time epics of 8 bit, has finally been promised to the 16 bit world. Expect even better action, graphics and sound than before. If hacking and slashing isn't to your liking then maybe you'd rather burn up some friends in Turbo Charge. You not only have to drive like a maniac, you must also shoot other maniacs too! Finally there's Fuzzball, which pits you against the fiendish fluffies, rebounding from platforms, hazards and breathtaking addiction - that's what System 3 would like to happen with it anyway. Will it be too cute for words, or will Fuzzball make you want to shave? Fuzzball is only £19.99 while Myth and Turbo Charge will set you back £25.99.

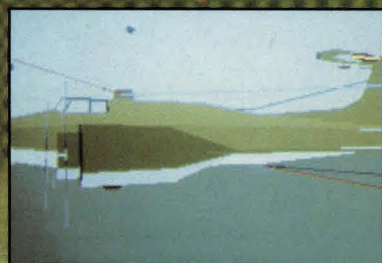


Turbocharge

Still waiting for a Super League?

Audiogenic has been promising Super League Manager for some years now. Perhaps it's waiting for the real thing to materialise... but it does promise it in April, so go out now and see if you can find a copy. You're in charge of one of the ace European clubs and it's your job to ensure that your team becomes top dog in the Super League. If not, it's your head on the block Boss. While you're

If you have just released the number one computer game of all time, you could be forgiven for sitting back in your Formula 1 and just watching the money roll in. Not so Microprose, they just can't get enough of a good thing... well a few good things actually. Andy Moss went across country to see what's next at Microprose.



Tetbury. Not one of life's better known towns, in fact as I wandered down one of its nondescript lanes I thought that if there was a World War declared no-one here could care less. There was talk in the town that someone managed to sidestep a stampeding sheep here once, but that was only a wicked rumour. It is hard to imagine that this sleepy blip on the border of Wales is the European head quarters of Microprose, the company that made its name in hi-tech flight sims and strategy battle software, but it most certainly is. Basking in the afterglow of Grand Prix, surely one of the milestones in entertainment software, the Microprose team are hard at work on a number of projects that will knock your socks off, and I was treated to a sneak glimpse of what is in the works. A.T.A.C. (Advanced Tactical Air Command) is under development by Argonaut Software, creators of Birds Of Prey. It is set in Columbia, where you are Supreme Commander of an elite covert team of 250 agents, four F23 fighter bombers and two helicopters, sent there by the US Government to crush the wealthy and powerful drug barons. It isn't a flight sim although you can fly the incredibly detailed aircraft, (fantastic light sourcing on the outside view) and there are no set missions because you decide

what missions to set. In short, it is a strategy game with a difference, which is a complete departure from the usual Microprose style. You direct all the action, all four aircraft can be missioned at the same time, and you can fly if you wish, or you can just go along for the ride, still making decisions, or you can just sit in your office and direct operations. Either way, you are in for a thrilling time giving those drug barons hell. B17 MEMPHIS BELLE is based on the film of the same name and features your own customized bomber, crew selection and aircraft nose artwork on a variety of bombing missions. Coded by Vector Graphics, the game features some of the smoothest and detailed filled wire frame graphics I have seen. A multitude of camera angles and zooms are available, and a neat driving sequence as you travel to your plane on the airfield. An excellent wargame. With SUPER TETRIS ready to go, and CIVILIZATION, CRISIS IN THE KREMLIN, DARKLANDS (a very impressive role player) and an as yet unnamed blockbuster to come, it is clear that Microprose are not just wallowing in the success of Grand Prix, they are using it as their benchmark for future product, which is going some by anyones standards. The good news is that they will do it, and then some.



Super League Manager

looking for SLM, track down World Class Soccer, but only if you've got 1Mb. It's promising to be everything that Kick Off nearly was. Audiogenic has concentrated on the playability without sacrificing appearances and effects. Will it succeed? Go and see, as it should be out by now.

Pressed for time

The Spring ECTS is meant to be a press and trade show. But if you're canny, you could probably find a way past the hordes of security guards and get a sneak preview of the latest in Amiga entertainments. All of the big names will be there, handing out literature, review material and freebies. As well as the customary scuffle among the stands, there are a number of seminars promised across a variety of subjects. What this means in real terms is that a lot of businessmen will be telling journalists how clever they are. I'd steer clear of them if I were you and concentrate on the buck's fizz.

Gold twins

Quote of the month: Andy Watt of US Gold's PR department, when asked where Mega Twins is and how it's going: "Don't ask, please. Bad subject." Miscarriage? Stillbirth? Can anyone at US Gold clear this matter up?

Going to the zoo

And where has Electronic Zoo gone? Rumours suggest that the staff are on holiday - without leaving an answerphone and with no-one left behind to take messages? Sounds fishy to me. Let's hope that it gets back in time to launch the excellent Abandoned Places 2. Stuart Bell, EZ's stylish boss, didn't comment because I couldn't get him to answer the phone.

This month CELTIC
LEGENDS, REALMS
and ANOTHER
WORLD are put
through Andy Moss's
review machine,
plus he gives you
some help with
SUSPICIOUS CARGO
and, of course,
plenty of news...

The adventure speak comes flowing out like the lightning bolts from Merlin's Wand! Adventure happens to be in this year, and so the marketing vultures come flying down on the carcass smelling a killing. I hope for all lovers of adventure in its many forms, that popularity does not mean poor product and high price, just better product because of keen competition. Make no mistake, software houses who until recently made their name on platform games and shoot-em-ups will start majoring on adventures and RPG's in a big

way. Do not be fooled by fancy packaging and advertising, instead watch for the reviews of the game first, and then decide. Companies that have experience in adventure, like Virgin, Mindscape, Sierra, US Gold etc, will know a good product when they see it, the rest will have to work hard to convince us otherwise. It can be done of course, Electronic Zoo's Abandoned Places is a good example, and I am sure that there will be many more, but be warned, check out Adventure Now! before you do anything. th SUSPICIOUS CARGO.



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CELTIC LEGENDS

Ubisoft £24.99

Contrary to popular opinion, this is not a new football manager game based on the famous Scottish club, but an RPG that is anything but Scottish. It is set in a mythical Realm called Celtika which is really a number of archipelagoes that are home to the warring factions of two armies each headed by an ace mage, one good, one evil (guess which one you play). It is a typical French production, some neat sound FX, classy graphics and very easy to learn to play, which is more than can be said of some of the RPG games from the USA. Celtic legends has borrowed a lot from Thalions Dragonflight, and carries a healthy mix of strategy and standard RPGisms with tons of magic and lots of battles. there is an option for you to sit back and let the computer fight your battles for you but it tends to be lacking in warfare subtlety somewhat, better you should direct operations yourself. The gameplay really offers nothing that seasoned gamers haven't seen before, and I suggest that its appeal lies more with novice players who may be seeking an introduction to the world of RPG.



Battlefield

nture

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adventure news

There are gremlins in the works

Gremlin have quite a few pots boiling at the moment. Following their success with SUSPICIOUS CARGO, and HEROQUEST, there are three major releases planned. SPACE CRUSADE ties up again with the board game of the same name and has you as a Space Marine aboard a space ship touring a solar system infested with all manner of aliens and weaponry. There are 12 missions to undertake ranging from simple seek and destroy to full assault, and winning a mission entitles you to increased rank and access to more weaponry. With a 40 by 40 3D isometric screen display, the game has all the ingredients to live up to its illustrious predecessors. DAEMONSGATE, is being billed as the largest and most in depth RPG yet seen. A bold statement indeed, but Gremlin are adamant about it. The game is set upon a world named Hester, for which a detailed rationalised background has been produced including a complex social structure, realistic ecology, and a logical geographical layout. You control a party of eight characters (made up from 32 scattered around the game world) who each have individual intelligence, who will go about their business when not controlled by you. These characters have personalities and their actions are controlled by their emotional responses rather than just having stats and follow the leader without question. There are five major elements to the game which consist of Land travel, town travel, combat, conversation and magic and the playing size is around 3,000 screens! A review shortly. Lastly, PLAN 9 FROM OUTER SPACE is a space spoof on the awful cult film of the same name that was released in the 50s. It was not the worst film ever made, but it ranks as the most entertaining bad one you'll find. In the computer adventure version, you play a private investigator who is hired to find the missing reels of the movie, splice them together and return them to the producer. 70 locations of high quality graphics are promised, along with a myriad of sub-plots interaction and inserts from the actual movie. It sounds like a lot of fun and should be out next month.

Domark in the shadow

SHADOWLANDS from Domark is also being hailed as the largest RPG ever seen! This however has some subtle

adventure news

lighting techniques which Domark calls 'Photoscape'. This system illuminates the landscape as you travel through, and realistically uses burning torches to light your way through the dungeons, and casts a stream of light from fireballs which can be cast into darkened rooms. Five playing areas from outdoors to inside a pyramid, incorporate realistic day and nightfall sequences.

Star Control II another chance?

Accolade, not content with the scathing reviews they got for Star Control 1, have gone back into the maelstrom for a sequel which frankly will have to be something special to get decent billing in this column. I have grave doubts that it will be anything radically different but you never know do you!

Out to bat again

Following the old adage that you can't have too much of a good thing, back comes BAT for another round with BAT II. This classy graphic adventure from Ubisoft was loudly applauded by me last time, and with BAT II there is more of the same... but better. In the Rise of the Dragon style with semi static scenes that uses the mouse to point and click on screen to move and use, this sequel has over 200 screens and no less than four flight sim routines. Add to this a



car chase sequence, a new architectural movement system, a next generation B.O.B computer and a new sound system, and there is plenty to look forward to here.

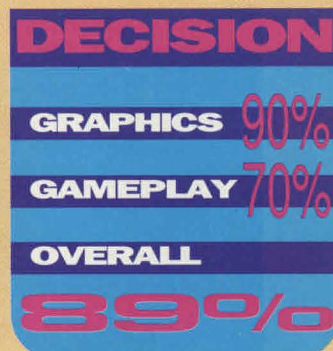
Prose in on the act

Finally, Microprose have put their awesome programming skills to a role player called HYPERSPEED, a sort of distant cousin to LIGHTSPEED, which has you exploring star clusters in search of planets that can serve as a new home for the Human Race. There are four star clusters to explore, each harder than the last, and each with scores of aliens that you can trade with, negotiate with, or just wage war with. 3D flight technology from their famous flight sims, this game features graphic imagery 'more detailed and smoother than we've ever done before'.

Following their successes with Cruise For A Corpse, and the Future Wars adventures, Delphine have been working on a faster system yet which still retains their graphical prowess. Another World is the first release using this new system which caters more for the dexterous joysticker than an adventurer's

brainpower for overcoming problems. Quite simply this game is very much in the Dragons Lair mould, one false step and frustratingly it's curtains, and that is what lets it down in the end. Because once you have completed it that's it. Finish. Now it is true that this can be said for an adventure, but an adventure can take weeks to solve, and even then there are in most cases an alternative method of achieving results. Another World has no save routine as such, instead it has section pass codes, so completing one stretch gives you code access to get there straight away next time. Using polygon graphics the animation is very impressive, particularly the intro sequence, and of course using this graphic system, allows for much faster gameplay, which is

essential in this type of scenario. You take the role of Lester the scientist, who is transported as a result of an experiment backfiring, to this alternative world, full of alien creatures, and dark caverns. Escaping is the only thing that matters, along with a quick thinking brain because right from the start you are asked to be nifty on your feet...or die! Befriending an Alien prisoner will aid your escape attempt, as will learning pretty quickly how to operate an alien ray gun which you will come across. From then on it's just a question of lightning reflexes and a good sense of timing to get you through to freedom. Overall it is an impressive game, classily produced as you would expect from Delphine, but geared more towards arcade adventure fans than any other.



There is really only one thing wrong with Realms, and that is its timing. I mean, here we have a perfectly good 'God' game just in time to be eclipsed by Populous II, Meglo Mania, and Utopia. Graftgold are better known for their arcade successes like Paratrooid 90 and the cute Rainbow Islands, so while this leap into the adventurish mould is welcome, because the game is well written, it doesn't stand a chance against more experienced opposition. Virgin might shout about this being more a war and strategy game than a 'God' sim, but honestly it is, erm, very 'Godlike'. Anyway to the game itself. You are by birthright the ruler of this fantasy realm, however, due to the death of your father (the King) there are lots of other like minded people who fancy their chances on the hot seat of power. So, it is your job to conquer the lot of them and claim your just desserts after all. How you achieve this comes in a number of traditional ways, all of them all too familiar with RPG players. Taxing your subjects to raise money for the army is an all-time favourite of mine, and there is plenty of taxing to be done here, the more money in the treasury, the more armies you can raise and the better they can be kitted out. Let us also not forget the folks who live

REALMS

Virgin/Graftgold £29.99

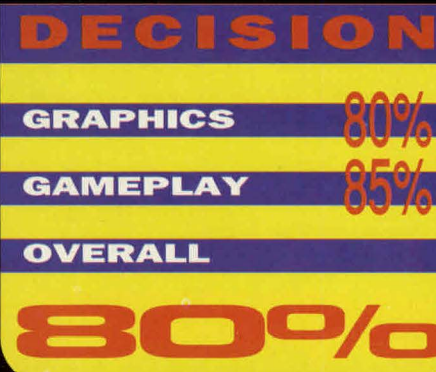
in your cities whom you are taxing, for they must be fed regularly, the city needs expansion if the population rises too high, and crops need to be harvested. Your offensives can be started from any city under your control, and it often pays to have more than one city sending troops to battle. Sieges are the order of the day as you try to capture your opponents cities, which of course you can draw from once the city is yours. But do not forget to defend your own land. The layout is very Populous, with over 125,000 miles of fractal landscape that is viewed in isometric 3D, while the city screens are static picture frames that are functional rather than beautiful. The game plays well, control over your empire's various needs is well thought out and there is a good mix of strategy and action. It is just a shame it wasn't out a few months earlier.



How to get started section

SUSPICIOUS CARGO

Push the illuminated pad, and then open the compartment. Get the travel bag, and close the compartment. Open travel bag, open coffin door, give 10 credit cards to messenger. Out, east, east, wait (until detective leaves), ask barmaid about the plastic mermaid, get plastic mermaid, west, north, north, west, show passport to the tall guard. Go north, north, up and then insert (put) the red keycard into the slot. Go in and tell babbage to launch. This will get you past the first series of 'instant deaths' and at least into a position where you have a bit of time to work out what to do next.



That's all for this month, but lots of good things to look forward to including HEART OF CHINA, LEISURE SUIT LARRY V, WILLY BEAMISH AND MONKEY ISLAND 2.

The Shape of Things to Come

CDTV TOP TEN

Since the launch of CDTV in April 1991, Janet Bickerstaff has looked at many titles. Some were excellent, others were interesting and fun to use, and there were just a few that did not seem to get it quite right.

SOFTWARE SNAPSHOT

Using her photographic memory, more than 600 megabytes she claims, Jeannie Lawrence provides a view of the here and now on the CDTV software scene.

WIN A CDTV!

CREATING CDTV

"Creating CDTV instead of computer entertainment is the difference between ploughing your field and digging over your cabbage patch" Clement Chambers, boss of Online, tells Ashley Cotter-Cornes of the pleasures and pitfalls of life as a CDTV product developer.

PUTTING IT ON THE PLASTIC

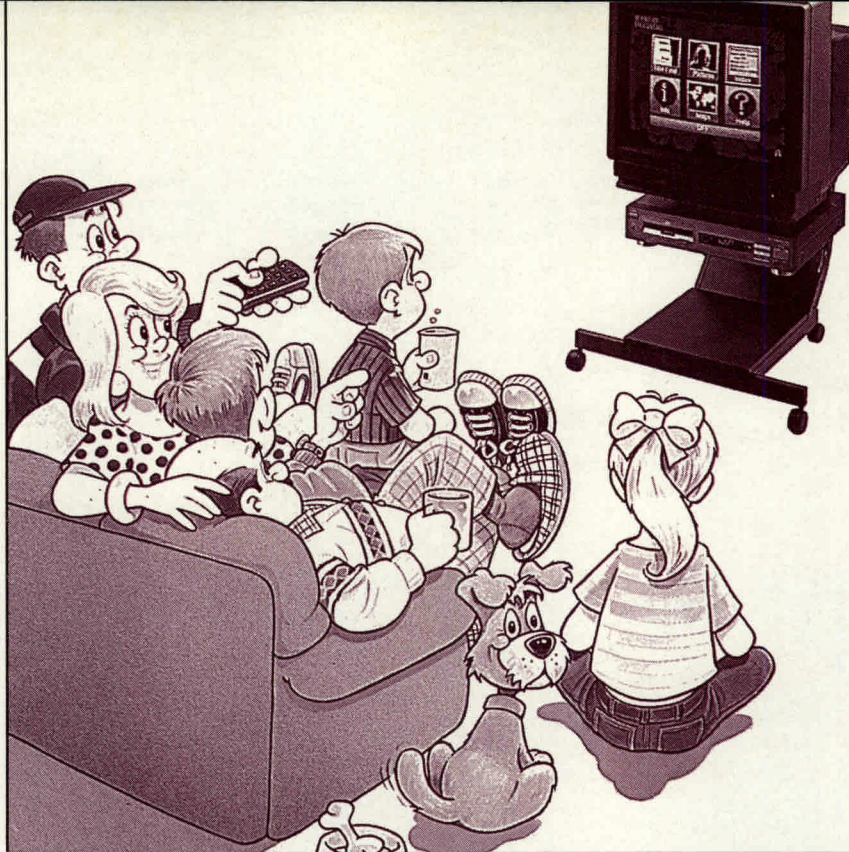
Mike Nelson goes in search of the secrets of creating the programs and actually putting them on those shiny circles at Europe's biggest CD maker.

COMMODORE'S VERY SPECIAL PROJECT

Made in the USA . . . The future of Commodore is bound up with the success of the CDTV. Mike Nelson looks at the history behind CBM's key product of the early Nineties in an exclusive interview with Gail Wellington, Commodore's Head of Special Projects.

This special Amiga User International CDTV supplement was created on the Amiga using Professional Page and other excellent Amiga DTP products.

**Made in the
USA... The
future of
Commodore is
bound up with
the success of
CDTV. Mike
Nelson looks at
the history
behind CBM's
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Nineties in an
exclusive
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Gail
Wellington,
Commodore's
Head of Special
Projects**



COMMODORE'S VERY SPECIAL PROJECT

Gail Wellington is one of the longest-serving members of the ever-changing team of top management at Commodore. Gail was recently acclaimed "Multi-media Personality of the Year, 1991" in the Edinburgh Learning Conference, an accolade of which she is justifiably proud. I was able to ask her about a number of topics of interest to the Amiga community, but especially about one product in particular. As Head of Special Projects, which now really means CDTV development, Gail was instrumental in the evolution of the machine and is now responsible for its future, both for new software and possible hardware improvements.

How then, did CDTV begin?

"The project began three years ago when Don Gilbert came back from seeing an OEM account who wanted to put a CD-ROM together with an Amiga motherboard, to make a point-of-sale terminal for some Japanese chain stores. Don talked to a few of us here and we thought that there ought to be something we could do with that

idea".

The concept was discussed with Irving Gould, Commodore's chief, at a series of meetings in New York and the basic design evolved as a range of ideas. Gail's engineering background was put to good use:

"We used to sit in my office, take a piece of paper, close our eyes and imagine that it was the remote control and how it would work. A whole bunch of ideas were envisaged. We even used a cigarette pack to model the size of the remote controller, and which direction it should go".

That explains a lot! Apparently, Gould himself was involved in the early stages, but it was not until June of 1989 at the CES show that Gail sought the advice of other people from the industry, again only discussing the concept. The response was favourable, but still nothing was finalised until a month later:

17lb Baby

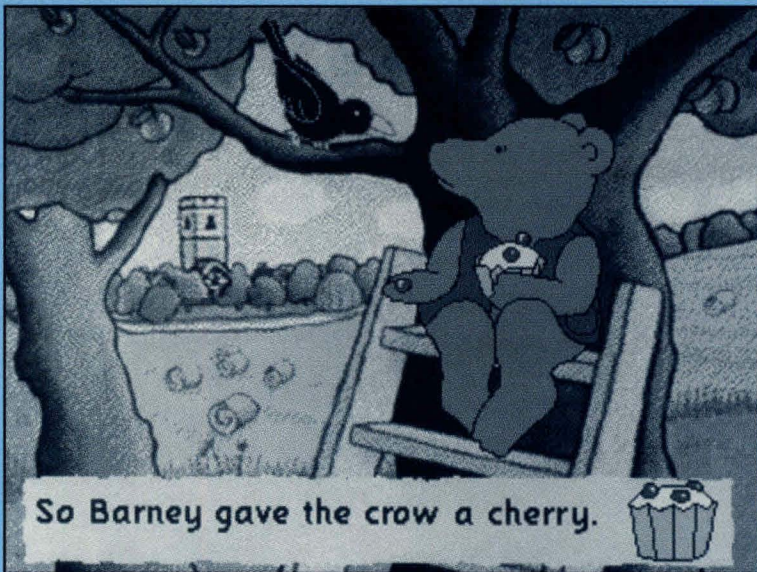
"In July, '89 there was a management meeting in London where Don got the OK and funding to go

and build some prototypes. So he went off and the weekend before Thanksgiving, (November) Don phoned me and said: "We have just given birth to a 17 lb baby that had a few birth defects, but nothing we can't fix".

"They said they really wanted a megabyte, and, since it was a multi-media machine, they wanted it all to be CHIP memory."

Thus the CDTV was born, but still unnamed so its code name inside Commodore became "The Baby" after this introduction to the world. A dozen prototypes were made and the cloak and dagger stuff continued for another month until December 1989 when a meeting was held with 35 CD-ROM and Amiga developers.

"We showed them the machine in the morning and in the afternoon they thought we were going to say "Now write us some software", but instead we asked "What's wrong with it?".



They first suggested we had to have a way to save the games. At that time the prototype was 512K so they said they really wanted a megabyte, and, since it was a multi-media machine, they wanted it all to be CHIP memory. Aside from that they didn't change very much."

The positive reaction from some notoriously enthusiastic developers had to be matched by a more cynical audience as there was still no firm plan to proceed with building CDTV as a mass market device.

Just Dreams

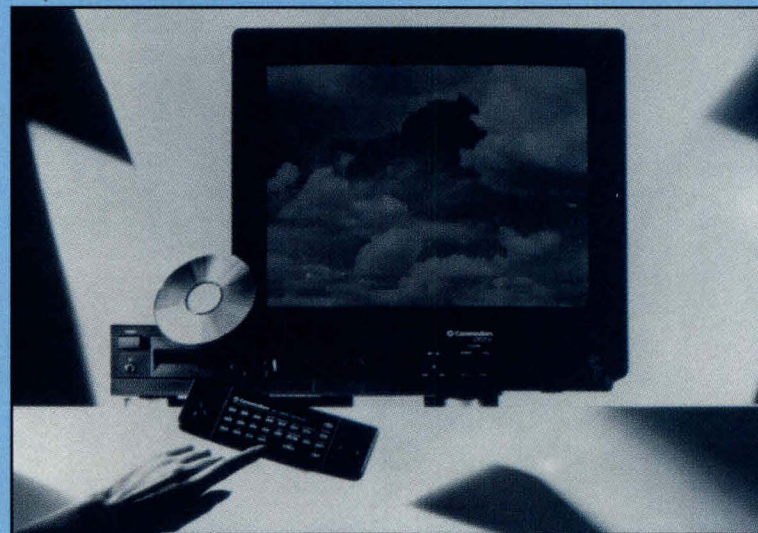
"In January, 1990 at the CES show, Las Vegas, we had a tiny booth and some trailers outside. I was in a small room at the end of the trailer and had lined up half a dozen appointments to show the CDTV prototype. The only things we could do were play audio CDs, and we used Afterburner, the Sega game on an Amiga floppy. We loaded it into memory and played the Top Gun soundtrack CD with Amiga sounds over the top just to show people the kind of things we would be able to do."

"I ended up doing presentations every half an hour for all four days of that show."

"We also had an early prototype of 'Living Book' running on an Amiga 2000. Everything else at that point was just dreams. Word got out that Commodore had this great new idea and everyone who saw it had to sign the non-disclosure agreements. I ended up doing presentations every half an hour for all four days of that show - as many people as we could cram into this little room. Every time I let one lot of people out, there was another bunch waiting."

This kind of interest, fuelled by the small design team's enthusi-

asm prompted Commodore into taking things a few stages further. The general managers, headed by Gould, gave the go-ahead to design a manufacturable product. This galvanised the team into overdrive and a few more proto-



types later and Commodore were once again impressing people at the CES show. This time in Chicago although things weren't yet complete as the CDTV was only running under AmigaDOS (nothing wrong with that!) and not the present industry standard ISO 9660 file system. That didn't last long:

"By Jan 91 we were up and running, ready to ship at the end of that quarter. This is a very short development cycle for a hardware product, mainly because we had such a solid foundation to build on as it's based on established Amiga technology."

How did you see the competition at the time?

"We knew there were other people out there like Philips with CD-I. We also knew what we wanted to do, and what our technology was capable of. So we set our sights on some very

specific goals, and haven't let ourselves be varied a lot by what other people could do."

"The loyal following of the Amiga is very important, and the fact that the CDTV player can be turned into a computer."

What are the strengths of CDTV compared to these others?

"The loyal following of the Amiga is very important, and the fact that the CDTV player can be turned into a computer, and similarly you can add a CD-ROM drive to a basic Amiga 500 to have the same functionality either way. We have lots of developers who already understand 90% of the technology, and only have to learn about the CD-ROM part. There isn't anybody else who has those kinds of strengths. Therefore we think we are positioned

relatively limited resources compared to the likes of Sony or Philips and so it is up to CDTV to sell itself, and no-one is going to shell out \$500 for a fancy CD player. This is what Gail had to say about the expansion possibilities:

"A hard drive will go still on the side as it has a pass through, and software will check to see if a memory card is available."

"The A690 should be available in quantity early in 1992. You'll be able to read files under normal AmigaDOS - the entire Fred Fish collection will be available on a single disk. A hard drive will go still on the side as it has a pass through, and software will check to see if a memory card is available or floppy drive for saving data. There's a real possibility of putting the Rom Kernel Autodocs on a CD for programmers to have on-line help"

That last one certainly gets my vote of approval as who else could offer such an environment? There is plenty of scope for bundling CDTV players with a keyboard and mouse (maybe in the guise of a CDTV-Plus or Professional) and also the advanced video mode (AVM), better known as Digital Composite TV or DCTV. Other exciting possibilities include digital pictures, if the standard from Kodak is licensed by Commodore. This would mean that you could take your holiday snaps from Majorca and collect a CD which contains the prints so you could marvel at Mum's "red-eye" syndrome in full AVM Technicolor.

"We are reasonably pleased with initial sales and are starting a heavy advertising schedule. People have to see it more than once to buy it, at the moment. Putting real demonstrators in



audi - The Shape of Things to Come

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Spring 1992 Issue

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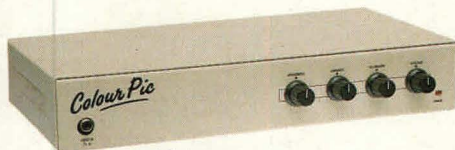


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stores at busiest times makes a big difference."

"We've heard a lot about full motion video and how difficult it is without MPEG, but CDTV can do a great job with CDXL."

"The technical details are secret, but the basic concept is simple in that we are maximising the performance of the CD-ROM."

What is CDXL all about?

"It's a technique developed by Carl Sassenrath of Xiphias. The technical details are secret, but the basic concept is simple in that we are maximising the performance of the CD-ROM. The disk is loaded in such a way that you can read large chunks of information continuously. Sometimes it's better to read things and throw them away rather than skip around the disk as the seek time is one of the slow features with the CDTV. To even get close, Macs have to cache a lot of information to a hard drive - when you see a CDXL demo next to these you know what real magic is. CDTV applications like Sherlock Holmes and Asterix are really exciting as they illustrate what is possible now."

Who would have thought they could do even that with a little 68000 machine?

"Who would have thought they could do even that with a little 68000 machine?"

Is there a big onus on developers to make CDTV work?

"Yes, absolutely. Without software CDTV is just a black box and it's what's on those shiny disks that really counts. Some great stuff is coming from the UK - Music Maker and Re-Mix are just two examples, and Psygnosis are major players as we're all waiting

for Planetside to become a reality and more than just a demo. Who would have thought they could do even that with a little 68000 machine? You never know what they've got up their sleeves!"

"We think that CDTV will stimulate Amiga 500 sales and CDTV will give people who might not buy an Amiga computer a chance to test the waters as it will be seen as a family consumer electronics device, not necessarily a computer."

On a more general note, Gail explained some of Commodore USA's marketing strategy for the Amiga 500.

"We certainly don't sell as many 500s here as in Europe, although that's changing to some extent. We did not take it out into the mass channels as early as in Europe. This was deliberate and you could argue whether it was right or not. The retail setup here

is different as there's no High Street as such, and we get a lot of discount stores where they pile things high in boxes, and I'm not sure that is the best way to sell something like the Amiga. We stuck to dealers for best support of the product, at least early on."

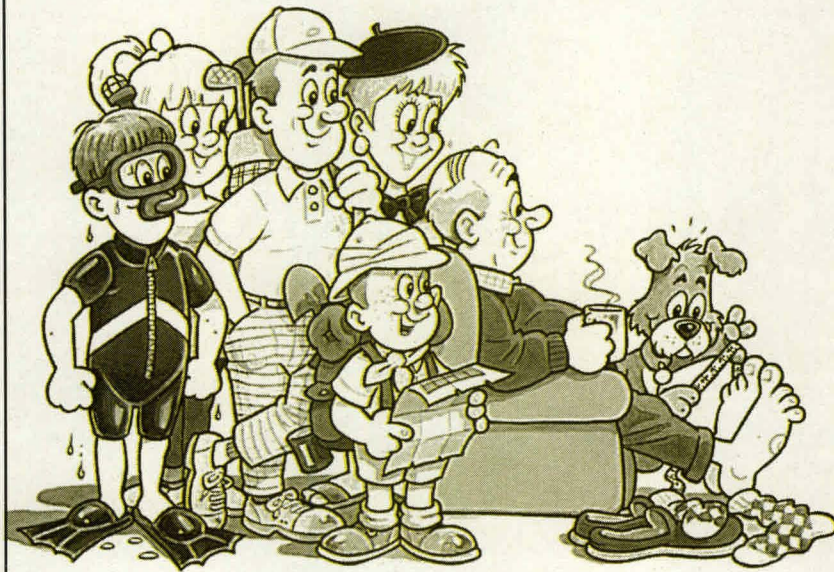
The Amiga versus the Atari ST is a debate which has raged in the UK since the machine were launched, but there is a new threat to the Amiga's number one position in the form of games consoles. I put this to Gail who was largely unconcerned:

"Nintendo has a lot of appeal among kids and parents aren't too happy about it and with the new 16-bit ones it'll be interesting to see what happens. A few years ago you were a social misfit as a schoolboy without a Nintendo, but these people are growing up and maybe thinking about something else. There's nothing wrong with blasting aliens (I've even been known to blast a few myself actually) and there's always a Lemming or two for a change, but people want more than that and the Amiga offers so much".

What is the main competition for the Amiga?

"In the US it's the low end PCs competing as games machines, and it's our belief we are well ahead of the Atari in Europe."

"Time will tell and the next few years will reveal Commodore's fate, linked both to the Amiga computer and the more vulnerable CDTV."



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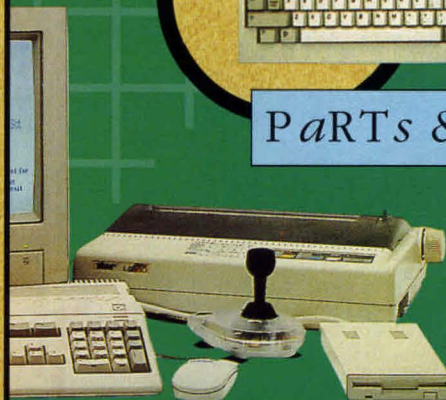
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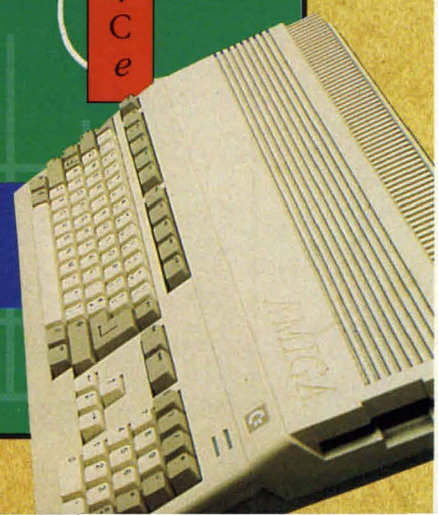
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REMOTE CONTROL PORT

For connecting an optional hardware remote controller

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For connecting an optional computer style keyboard or game controller

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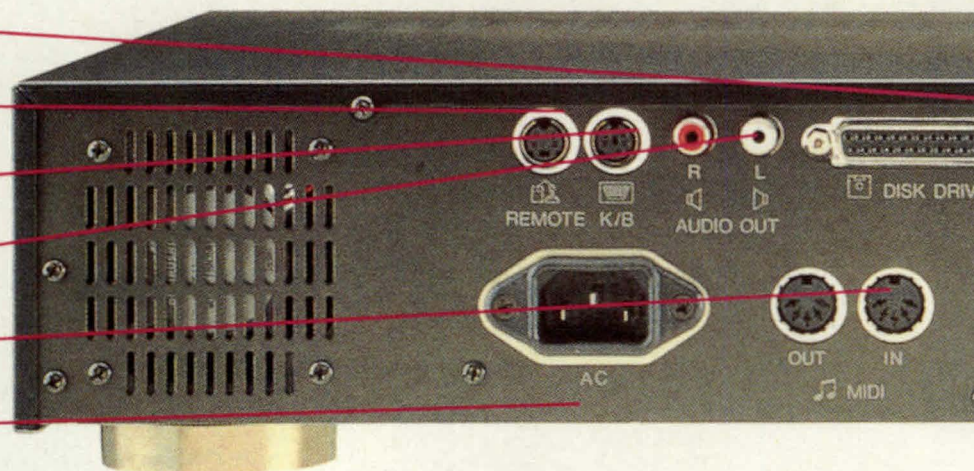
Stereo audio outputs for connecting to a hi-fi system

MIDI PORTS

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MAINS INPUT

AC mains power supply



REMOTE SENSOR

Receives commands from the infra-red remote control

DISC L.E.D.

Lights up when the CDTV is loading data

POWER SWITCH

On and off switch for CDTV operation

MAINS LED

Lights up when CDTV is turned on

HEADPHONE SOCKET

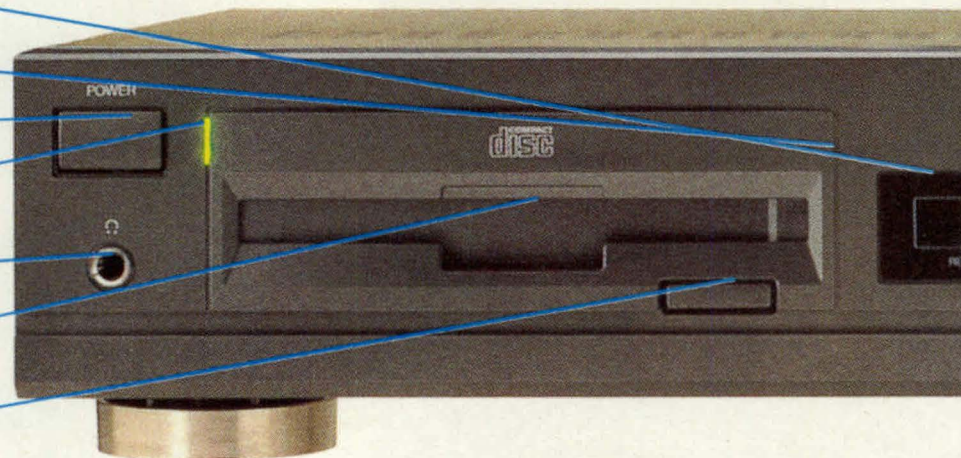
Used for private listening to CDTV audio

CD DRIVE

Slot for inserting CDTV disc (These should always be in a caddy)

EJECT BUTTON

Press to remove a disc from the CDTV



ESCAPE KEY

To escape from an application, consult a help screen, or choose further options

NUMERICAL KEYPAD

For entering numbers and choices

GENLOCK

Allows you to mix video or TV signals with any CDTV information

DIRECTION CONTROLS

Used to move the highlight or pointer around the CDTV screen

ENTER KEY

Confirming or signalling that you have finished a particular action

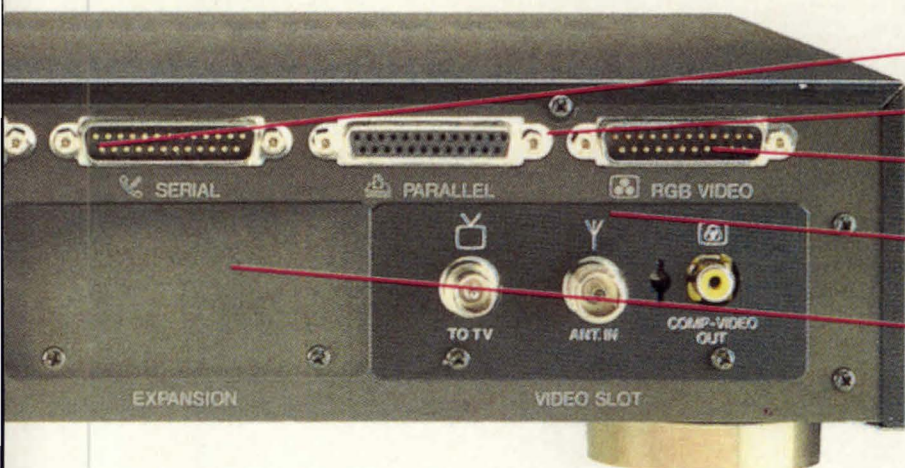


CDTV Audio Specifications

| | |
|---------------------------|---------------------------|
| DUAL 16-BIT D/A CONVERTER | 8x over-sampling |
| AUDIO OUTPUT | External 1.4 RMS, 10k OHM |
| FREQUENCY RESPONSE | 4 20KHz |
| SIGNAL/NOISE | -102 DB |
| CHANNEL SEPARATION | -85DB |

CDTV Audio Specifications

| | |
|------------------------|--|
| HARMONIC DISTORTION | 0.02% at 1KHz |
| MAXIMUM AUDIO CAPACITY | about 28 hrs AM quality |
| SAMPLE RATES | Variable from CD audio rate (44KHz - 6KHz) |



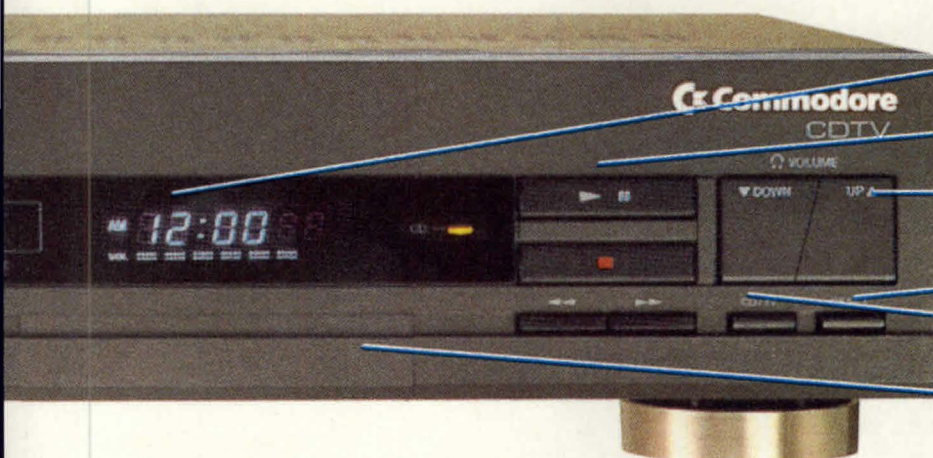
SERIAL PORT
Allows an optional printer or modem to be used

PARALLEL PORT
Allows an optional parallel printer to be used

RGB VIDEO PORT
Connection for computer style monitors

PAL CONNECTORS
PAL TV connectors for plugging in a domestic television and external arial

EXPANSION PORT
For optional networking, genlock and modem accessories



TRACK DISPLAY
Displays time, track and volume information

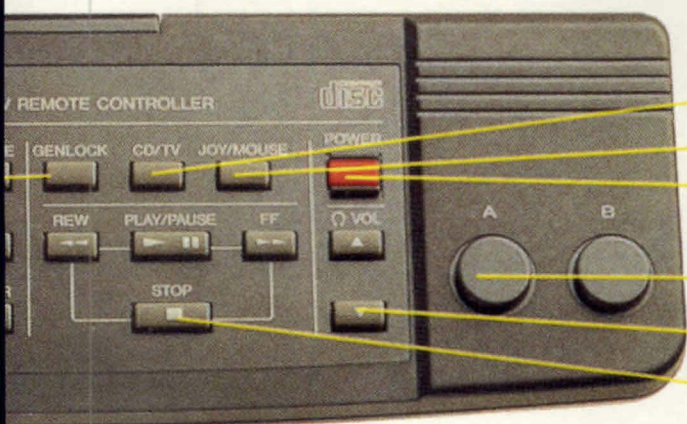
TRANSPORT CONTROLS
CD audio controls for play, pause, stop, fast forward, rewind and skip

VOLUME CONTROL
Increases or decreases audio volume from the CDTV

RESET BUTTON
Restarts any CDTV application

CD/TV BUTTON
Switches between CDTV and normal TV viewing

MEMORY CARD SLOT
Removable cover for optional memory cards



CD/TV KEY
Switches between CDTV and normal TV viewing

JOY/MOUSE
Switches between joystick, mouse or other hardware type computer control

POWER BUTTON
On and off Switch for CDTV operation

SELECTION KEYS
Used to make a choice or confirm an action within a CDTV application

VOLUME KEYS
Increases or decreases audio volume from the CDTV

STOP KEY

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SOMETHING, WE RECALL

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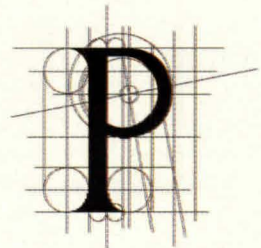
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PageStream 2.2, HotLinks, BME and PageLiner: Winter '91. Art Expression: coming soon.

Using her photographic memory, more than 600 megabytes she claims, Jeannie Lawrence provides a view of the here and now on the CDTV software scene.

SOFTWARE SNAPSHOT

In the comparatively little time since Commodore's "Special Project" has become reality, CDTV has been given a warm welcome by software developers who see the potential of a major new market. Worldwide we are told that there are now more than 200 programs coming available.

Some of these programs are repeats of what has previously appeared on computer formats such as the Amiga. And as many who buy the CDTV will never have used any computer, that has a certain logic.

Other programs, more interestingly, are being specially created to use the extra memory and

facilities that CDTV offers. As can be seen from the following pages, there is already a surprisingly wide variety of this material available for a machine with such a short history.

The list we have provided here is as complete as we can make it. Of course, more CDTV disks are appearing all the time, so when you read this it may already be somewhat out of date. But it is a snapshot of what you can buy now if you have the fascinating black box that is Commodore's Dynamic Total Vision of what the future of home electronics is going to be.

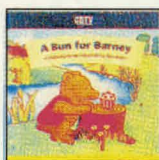
Education

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A set of exercises to test your intellectual aptitude. Challenging tests on memory, stress, reflexes, listening, logic etc.

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CD-Simulator

CDTV SOFTWARE

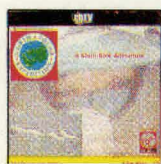
NORTH POLAR EXPEDITION

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The classic story of Peter Rabbit. Teaches pronunciation, syllables and word meanings. In English and Spanish.

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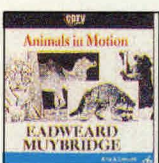


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For anyone interested in Art, Photography and Animation, this program lets you examine, manipulate and export a wide range of animal images.

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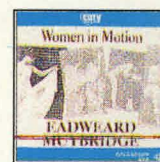
CDTV Publishing

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Encyclopaedia of movement, based on some of the great historic 19th century photography. You can examine each frame, print it out, or load it into an art package and work with it.

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Easy to use, icon-driven language. Over 100 different samples.

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150 digitized sound samples of original performances of some of the great Composers, from 1600

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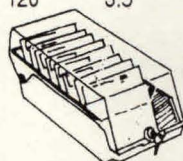
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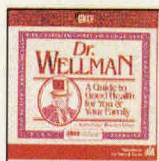
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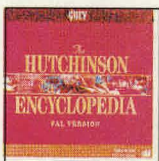
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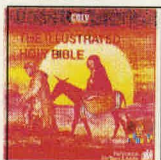
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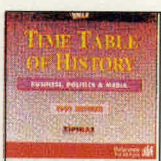
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Animated Pixels



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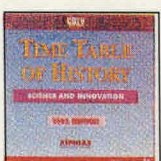
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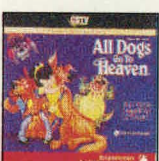
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Applied Optical Media Corp.

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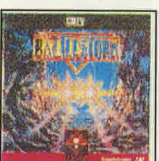
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Price: £29.99
Titus Software



BATTLECHESS

Over 4MB of dramatic 3D animations with 10 different

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Interplay Productions

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An adventure game that lets you become the only agent of the Bureau of Astral Troubleshooters who can save Terrapolis.

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UbiSoft

BASKETBALL

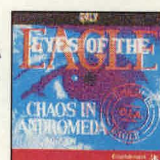
Own, manage and coach your own basketball team. One or two players can challenge each other, or let the computer play against itself.

Price: £29.99
Context Systems

CHAOS IN ANDROMEDA

Futuristic Fantasy role-playing adventure. You have been chosen to be sent to the planet of Koranis 12, to locate and return a missing scientist.

Price: £29.99
On-Line Entertainment



CLASSIC BOARD GAMES

Enables you to play Chess, Draughts and Backgammon on your television set. Audio directions are provided in six languages - English, German, Japanese, French, Spanish and Italian.

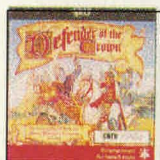
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Merit Software



DEFENDER OF THE CROWN

Based on the adventures of Robin Hood and Ivanhoe; with fully orchestrated stereo soundtrack, sound effects and speech.

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CDTV Publishing



DINOSAURS FOR HIRE

Another in the series of comic books. With hundreds of pages

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Wright Enterprises

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Flight simulation with accurate weapons systems and cockpit controls.

Contains 36 separate missions in three combat theatres.

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Context Systems

LEMMINGS

Save as many lemmings as you can, in this entertaining and addictive game.

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Mystery adventure. This can be a disappearance or a robbery. There are many roads, and the choice is yours.

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CDTV Publishing

NINJA HIGH SCHOOL COMIX

A tongue-in-cheek comic book where an other wise normal American child gets involved with strange characters.

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It challenges you to discover who killed Derrick Reardon. There are 8 suspects, and 16 stories to test your skills.

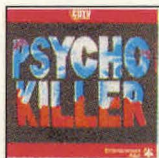
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MURDER
ANYONE?

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An interactive thriller where the plot and game are interwoven. You must confront the killer, rescue the potential victim, and escape.

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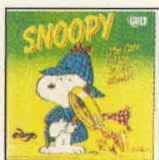
Price: £29.99
Maxis



SNOOPY

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CDTV SOFTWARE

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Full colour pictures, superb animated graphics stereo music and special sound effects with 2,000 questions spoken by well known celebrities and a cartoon animated Master of Ceremonies.

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TAI Horn Abbot Int. Ltd.



UNREAL

A magical, fantasy-arcade game. Your objective is to destroy the Master of Darkness.

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UbiSoft

WAYNE GRETZKY HOCKEY - 2

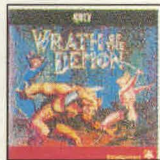
Simulates every aspect of the game of Hockey. You can make up your own teams, control any player and the game speed, set the level of difficulty, etc.

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Bethesda Softworks

WRATH OF THE DEMON

You have been summoned by the King to defend the Realm, rescue the Princess and rid the kingdom of the evil demon.

Price: £29.99
Readysoft Inc.



XENON 2: MEGABLAST

Arcade style game. Features a special mix of Megablast by Bomb the Bass and uses a special technique to give you 3D Sound.

Price: £29.99
Mirrorsoft



Mike Nelson goes in search of the secrets of creating the programs and actually putting them on those shiny circles at Europe's biggest CD maker.

Putting it on the plastic

One of the main strengths of CDTV is the established base of both developers and software tools which has grown up over the seven years since the Amiga was first unleashed on the planet. Since then, steady progress towards multi-media has been made, and CDTV developers can now take advantage of them, keeping those all-important production costs down. Other multi-media manufacturers have to start this process from scratch and developers have to learn about the various systems, whereas Amiga technology is established and loved by millions.

Although CDTV can be thought of as an A500 with a huge 650 Mb disk drive welded on board, this is too simplistic and does not reflect the versatility of the device. For instance, the machine is capable of playing regular music CDs, CD+G graphics support is also included and CD+MIDI. This is all alien to conventional Amiga programmers and so must be understood if full advantage is to be taken of the features offered by CDTV.

Certain priorities were laid down in stone tablets about how a CDTV application should look and work

From the outset, Commodore had a clear vision of what they wanted from CDTV

au! - The Shape of Things to Come

developers. The product was always going to be one for general consumers, rather than computer freaks who enjoyed playing around with startup sequences and figuring out Guru meditation numbers. Certain priorities were laid down in stone tablets about how a CDTV application should look and work, and by and large, this worked reasonably well, even if the early applications didn't really push the technology greatly. More recent releases have shown a marked improvement over the initial disks but there is still plenty of uncharted territory left.

no mouse

Although CDTV springs from the A500, there are a number of facets which make developing more awkward. Firstly, the interface is completely different. Communication between the CDTV and user throw up several important points to bear in mind, not least the controller with its simple buttons and no mouse or keyboard, although these are now options so should be supported, but not assumed. Intuition is still the guiding Angel of CDTV and was designed like most WIMPs with a mouse in mind, so using cursor keys can prove irritatingly slow to say the least.

Another very real problem for CDTV developers is the wide variety of displays that will

tell the user what is going on. The cost of generating CD's is pretty horrific and it is unrealistic for publishers to release a different version for each country. Aside from the language issues, there is the age old problem of different television protocols. Early programmers, used to the consistency of RGB monitors were horrified to see NTSC mangling their beautiful graphics, and once this was right, PAL versions looked dreadful! Luckily, clever use of colours, and avoiding fully saturated shades alleviates most of these problems.

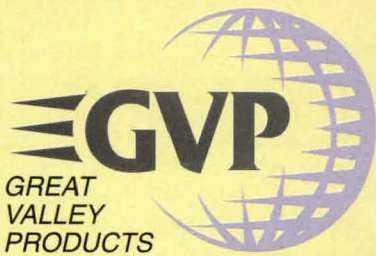
The CDTV display is meant to be read at a distance on any ropey old telly, and so developers are issued with very strong guidelines as to the fonts used to show text and the point size/colour combinations that are acceptable. Clarity can be considerably improved by using techniques such as anti-aliasing and drop shadows, and this also holds true for standard Amiga displays too!

generating sound

Sound is another area where the CDTV developers have to be very careful. The CDTV may be connected to anything from a Bang & Olfsen HI-FI to our ropey old telly, and the difference in sound reproduction will not be subtle. Catering for the extremes is one part of the equation, and the other is deciding how to generate different sounds, as the device is capable of utilising the standard Amiga channels, or the 16-bit D to A of the player. Usually, speech is much clearer using the latter method, but there are certain programming considerations.

Programmers familiar with the Amiga's operating system, particularly device handlers will be relieved to know that this is the method for controlling the CDTV. Regular AmigaDOS files are accessed using the logical device





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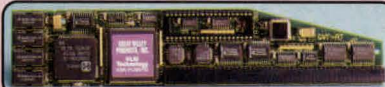
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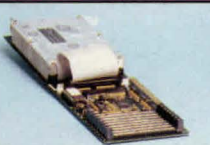


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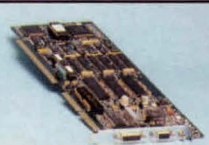


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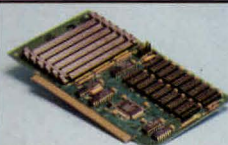


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CD0:, but how do you get the CDTV to play → an audio track? The disk has 2-99 tracks on it which can be precisely controlled (well, within 1/6 of a second), so a programmer may have all his speech in a massive track, and can then tell the CDTV to play, for example, 15 seconds from track 12 starting 6 seconds in. Once the programmer has issued this command, the computer side of things is freed up to carry on with animation, or whatever. What it must not do, however, is to try and access CD0: when it is busy playing an audio track, or a conflict of interest between working and not working occurs.

The device is capable of utilising the standard Amiga channels, or the 16-bit D to A of the player

making the disks

So much for the programmer's lot, but what happens to the data and how does the CD end up getting made? Commodore's right hand people in this area are called Nimbus Information Systems (NIS), and I visited their Monmouth headquarters to see the process first hand. Firstly, a bit of background of the company.

Nimbus Records was formed over twenty years ago as purely a record company, dedicated to perfect recording of classical music - you won't catch Kylie Minogue sauntering around the picturesque setting that straddles the Welsh/English Border. In 1984, the switch from conventional vinyl to the new, emerging Compact Disc format was made, and this was quite a brave move given the embryonic status of the medium which we now take for granted. Nimbus Records gave birth to NIS back in 1987, and since then this arm of the business has excelled into one of the largest and most profitable producers of CDs in the world. So how does one get from making posh recordings of violinists to CDTV?

They were in close consultation with Commodore when the CDTV was only a glimmer in CBM's eye

CD-ROM technology has actually been around for several years and Nimbus, with their recording experience were very quick off the mark to see its massive storage potential. As Emil Dudek, general manager of the CD-ROM section says "There isn't any other storage medium which even comes close in terms of its durability, cost and size". Because of their expertise, they were in close consultation with Commodore when the CDTV was only a glimmer in their eye, and helped sort out many of the teething problems experienced by early developers like Jim Hawkins who wrote the excellent Music Maker package. This has proved so popular that it has been re-pressed several times.

What do they actually do at Nimbus? There are several different groups at work, and the manufacture process is the mainstay of their

audi - The Shape of Things to Come

CD-ROM section. They do have extensive research and development facilities working on exciting projects such as 2.5 gigabyte disks (four times bigger than CDs), but most of these are decidedly secret and hidden away. Their software development is very interesting though, and I will describe more about this next month in our special multi-media supplement.

the production process

A CDTV developer will usually have all the necessary files safely tucked into his Amiga's hard drive, and to get these to Nimbus is the first step to overcome. Nimbus will actually take the data in a wide range of formats (even a mountain of floppies, but that makes life extremely awkward) and most Amiga stuff comes "pre-formatted" into the ISO 9660 standard that CD-ROM drives work to.

Registered CDTV developers receive software called C-Track that goes through all the hard drive files creating an ISO-compatible image of the original AmigaDOS files. In fact, the strict ISO 9660 only allows for MS-DOS style short filenames so Commodore took it on themselves to circumvent this, but in practice this doesn't matter much.

This ISO 9660 can be on almost any medium from optical disk, DAT, although a SCSI hard drive is the most usual. Mastering machines with SCSI interfaces are becoming available, so then it will be possible to connect the Amiga straight onto the process. At this stage, all the other digital data such as the audio is also introduced and the user has the option of cutting a Write Once gold disk (costing a mere £350), although this differs from a WORM by the fact that it is fully ISO 9660 compatible with any drive, and so can be tested both against the original data, and in the destination machine, before the very expensive mastering stage is entered.

The master is initially manufactured from glass so you can imagine how depressingly fragile this is

This is where the process gets really serious as a kind of template master must be made. This is initially manufactured from glass so you can imagine how depressingly fragile this is. Various other negative and positive images of the glass are used to make a stamper which is capable of generating 600,000 disks, and the master is stored rather carefully in a chemically inert oil, deep inside an everything proof safe.

The CD is made from plastic with an

aluminium layer used to reflect back the player's laser beam, and a clear coffee-proof lacquer is applied to prevent the aluminum from oxidising. The data is stored in a series of pits which spirals from the centre. If this was to be opened out, it would measure about 3 miles, so the resolution of the system generating the spiral must be absolutely precise and thoroughly tested. Herein lies the big difference between audio CDs and CD-ROMs. Although the CD standard and its error correction, allows for quite a large tolerance (like a hole 1 mm across!), the CD-ROM must be absolutely perfect as even one wrong bit in 600 megabytes could prove terminal for the computer.

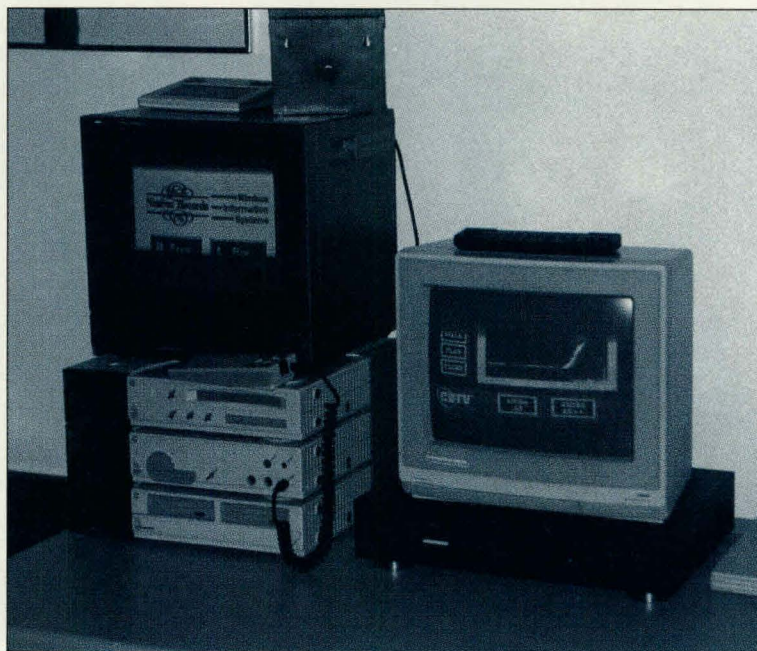
checking the bytes

Nimbus pride themselves on having one of the best records of quality assurance in the world, and their automated testing has three different layers with literally hundred of different checks. Every disk is scanned for problems which throws out an incredible 95% for further tests.

Thankfully for plastic lovers everywhere, 98% of these are fine, maybe with a speck of dust, despite the rigorous environment control, and go forward into the random sampling where every byte on the disk is checked for validity to determine finally if the quality is up to scratch.

Once all the disks have been made, all that remains is to package them up into those adult-proof jewel cases and away you go.

CDTV development is not an easy process, but it is one which is expanding more and more. As Emil says, programmers have only recently got to grips with the technology, and the temptation to try and translate conventional indexing or interfacing methods to CD-ROM must be resisted. Putting in hundreds of links in HyperText is one way of getting your user completely lost in a mountain of facts, and losing their attention rapidly. We will examine new methods of accessing data mountains next month.





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COMPETITION

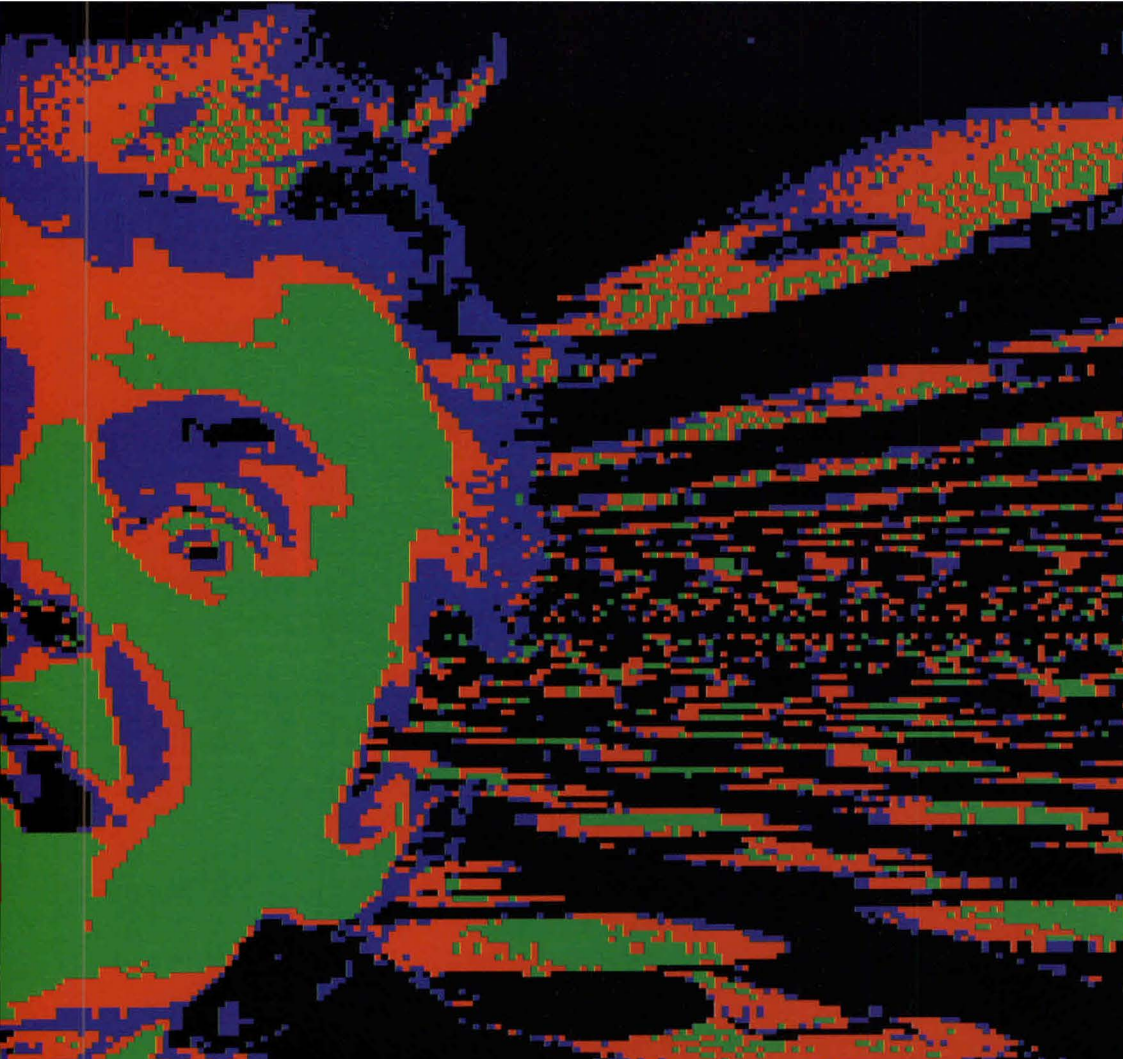


This CDTV is waiting for



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- 1** Who is Clement Chambers?
- 2** Where is Nimbus Based?
- 3** Which year was the development of CDTV begun?



Tie Breaker.

In not more than fifteen words, say why the CDTV has an advantage over other consumer multimedia devices.

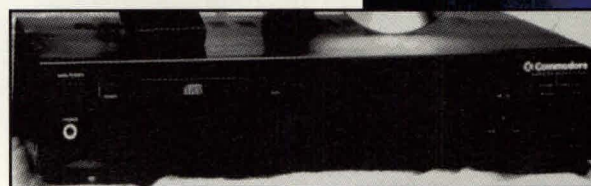
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Amiga User International,
Panini House,
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to reach us by 30th June 1992.

No correspondence will be entered in to and the Editor's decision will be final.

just waiting, you!



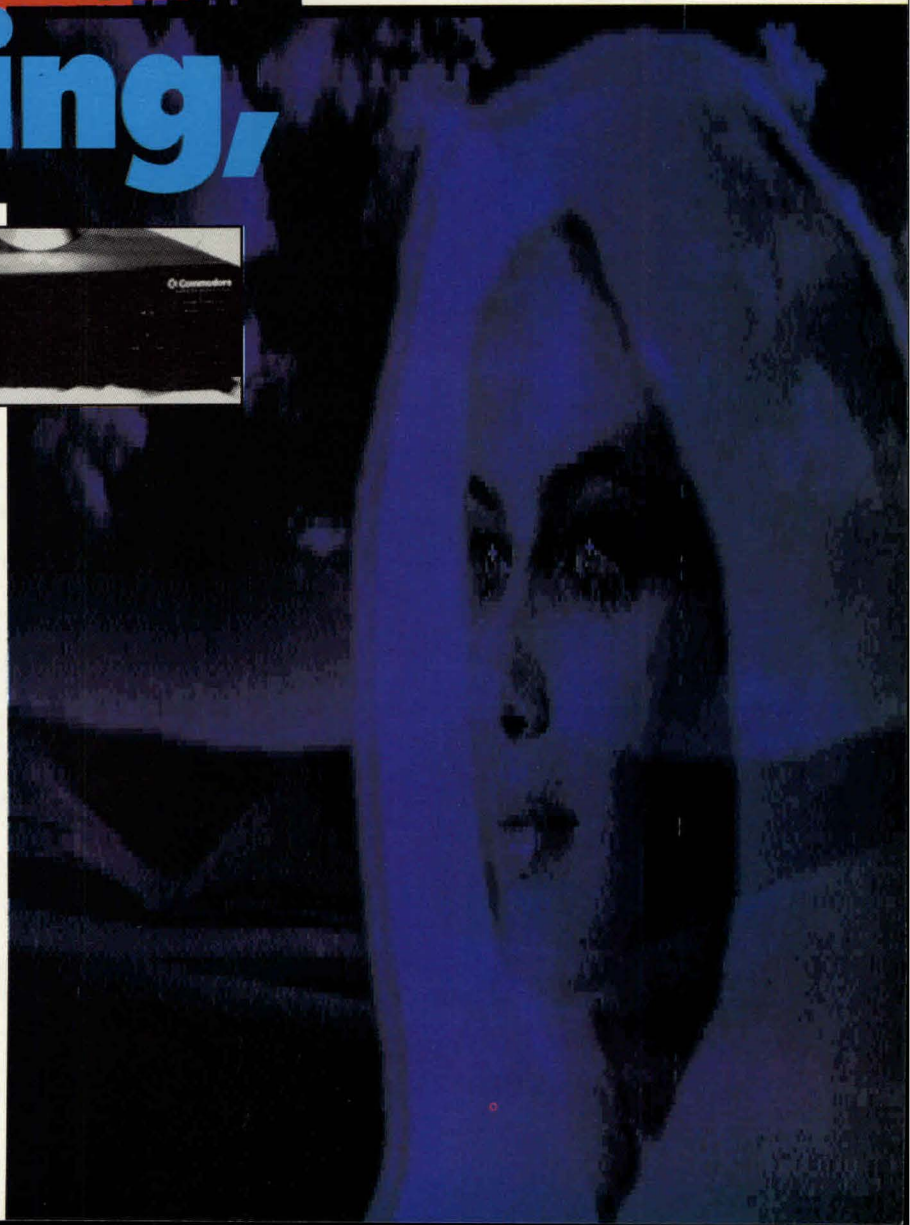
4

What is interactive media predicted to replace?

5

Name one language program on CDTV.

(All the answers may be found in this AUI The Shape of Things to Come CDTV supplement)



Creating CDTV instead of computer entertainment is the difference between ploughing a field and digging over your cabbage patch" – Clement Chambers, boss of Online, tells Ashley Cotter-Cairns of the pleasures and pitfalls of life as a CDTV product developer.

Clement Chambers is very certain of where Online fits into the CDTV marketplace: "We're producing the best stuff, everyone else is streets behind us." But what's involved in creating CDTV and how difficult and costly is it?

ACC: How long has Online been involved in CDTV?

CC: About 18 months, I'd say. Women in Motion was our first product and that was also the first CDTV product in Europe, maybe the world. We've been involved in projects ever since we heard that CDTV was coming.

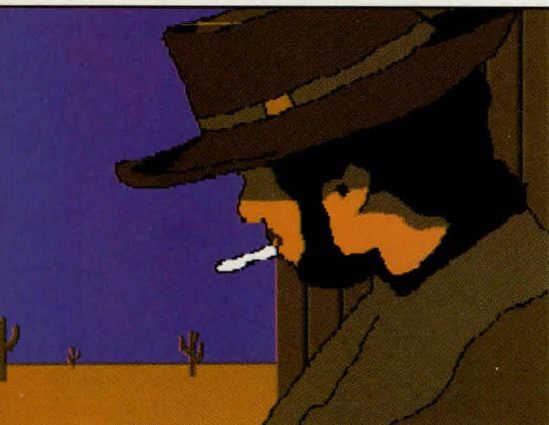
ACC: So do you have a contract with Commodore?

CC: No, but it'd be unfair to say that they haven't supported us. We're independant though. No-one can tell us what to produce.

ACC: Let's get onto the production of a typical project. How do you go about creating a piece of interactive media?

CC: Life begins with a storyboard. We get an idea that will work and one for which we have a source of material. If the idea's the best thing ever dreamed up but it is difficult to get material for, it has little chance of succeeding. Then we have to do our research and find

CLINT – A town with No Name.



locations, actors, artists and musicians, film crews, studios, the lot. Putting all that together is the next stage, making the idea become reality.

ACC: And is that a time-consuming process?

Every time you want to make a change to the product, you have to write to a new master disk.

CC: Most companies find it impossible. We're much more like a film studio though. Most of our competitors are trying to piece stuff together, bit by bit. Our process is mainly automated, which allows us more time to be creative. I know of projects which are still not completed two years after they started!

ACC: Are there technical considerations?

CC: There's the mastering to think about. Every time you want to make a change to the product, you have to write to a new master disk. That costs between #500 and #1000 and this applies whether it's a fundamental change or just a spelling mistake.

ACC: That brings me nicely onto my next point. How much is it likely to cost?

CC: That depends on the product and how costly it is to source the material. To get decent actors

costs upwards from #1000 per day. Then the studio, which weighs in at about the same, plus a musician to do the score. Filming the thing is also a major cost. It can take up as much money as you want it to - Terminator 2 cost \$101 million for 90 minutes of end result, so divide that by however long your product is and that's your ceiling. Of course, we could never afford to get in THAT deep...

ACC: Presumably, you're restricted by the capabilities of the hardware, too.

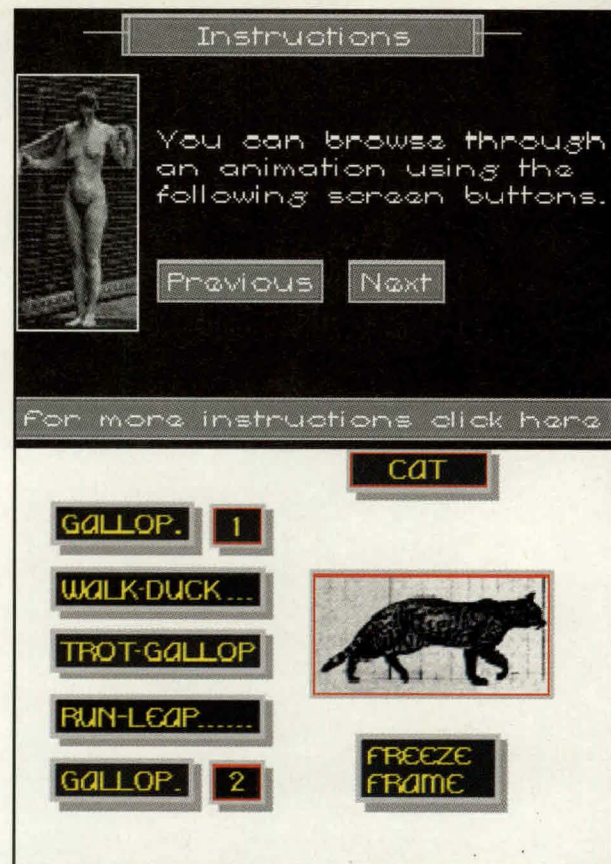
CC: Well, we do have to worry about the time it takes to get film into a video window and we prefer to use CD quality sound. The maximum possible to get onto a disk is 72 minutes of sound, but in real terms 15-20 is our limit. It's surprising just how far that will go though. In other terms it's like having an Amiga with a 600Mb hard disk.

ACC: Does the prospect of filling 600Mb of disk fill you with joy, or is it a pain?

CC: It's a pain when we run out of space...

ACC: Ah.

CC: ..especially as we are concerned with



developing original, entertaining products. Who wants Super Mario Brothers with two digital soundtracks from a group no-one likes? It annoys me when people use CDTV to do something as lacklustre as that.

ACC: What are you working on now?

CC: Well, we're continuing our "In Motion" series to include Men in Motion. They are useful for DTP, PD writers and what have you. But these cyclopaedia are an aside from our entertainment titles. There's Sign of Four, which is a Sherlock Holmes type of interactive adventure. Of course, Psycho Killer 2 is due out soon and that's miles better than the original. We've also got something called Emergency Languages which a traveller can use to get hold of 100 easy phrases in many tongues, to get him by on a business trip, say.

ACC: One sentence: sum up your contribution to CDTV.

CC: We are DEVELOPING CDTV while others are just propping it up.

Others, of course, might not agree. But Clement Chambers has been around a long time in the software business. And he knows that survival depends on getting the customers to buy what his company develops. If it is good, if the public like the quality, it will go on selling. If it isn't...well, software development can awfully expensive affair especially in an area as new as CDTV...

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Janet's TOP TEN

Since the launch of the CDTV in April 1991, Janet Bickerstaff has looked at between thirty and forty titles. Some were excellent, others were interesting and fun to use, and there were just a few that did not seem to get it quite right!

There are five categories of titles. I have chosen two from the Entertainment section.



1

Lemmings

What more can I say about Lemmings? Just in case there is anyone who has not played Lemmings on an Amiga, it is tremendous fun and really can become an obsession. We recently acquired a CDTV Trackball and this gives superb game control. The only trouble is that it requires strong self-discipline to switch off and get on with anything else!

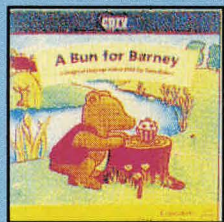
2

Xenon 2

This was written by the Bitmap Brothers and recorded in Roland Sound Space. I enjoyed this CDTV version of the Amiga game. It is a great shoot-'em-up and requires speedy reactions on your part. Your spaceship, the Megablaster, has to find its way through a myriad of missiles to save the universe from the dreaded Xenites. To control the game use the joystick mode on the remote control, but for faster response, or two player-mode, use the joystick ports on the CDTV Trackball and fire away.



CDTV comes into its own for Education. I chose three titles, but would have liked to include Fun School 3 as well.



3

A Bun for Barney

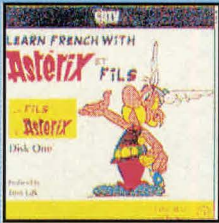
For the younger children this is pure joy. The little ones will want to see it over and over again. The story is well narrated and there are hidden games and nursery rhymes to be found in the pictures.

4

Learn French with Asterix

Interactive multi-media is a brilliant and painless way of learning a foreign language, in this case French. The title is based on the famous cartoon character, Asterix, and takes you through a story with speech and pictures. You can choose to read the words and/or hear the story and the translations. By using Microdeal's Voice Master you can even record and playback your own efforts.





5

Japan World

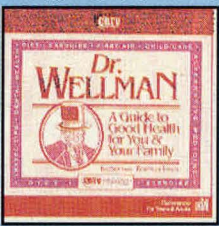
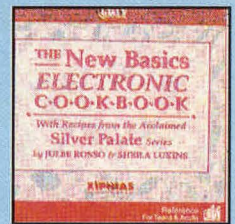
This is also a language course, but much, much, more. It is an introduction to the culture and customs of Japan. It is estimated that around twenty-five hours' of study should provide a reasonable level of knowledge and proficiency. It is an ideal disc for use in schools or for the business man or holiday-maker planning a trip to that country. It is well-produced. The audio is clear and the pictures are beautiful. The items covered include art and culture, travel, history, religion, geography, food and drink and shopping. At the end of each section is a brief test to see if you have been paying attention. The language is taught in easy stages with just a few words to learn at a time. You can even master the art of writing Japanese characters. Japan World was produced by Global Learning Systems in conjunction with Derbyshire County Council and Commodore.

Under the heading of Reference I was really spoilt for choice.

6

The New Electronic Cookbook

From the Xiphias stable, this is based on the American Silver Palate cookbook, so the recipes and ingredients may seem unusual at first to British eyes. Although the measurements are given American style there is an icon for a metric equivalent. The main menu lists Food Groups, Menus and Recipes, Meal Types, The New Basics, Special Occasions and a User Guide. You can select by recipe, occasion, or even by the contents of your fridge which you may need to use up. Substitutions are suggested if you are short of an ingredient. There are pictures of many foods and a "hot word" search for further information. A help icon brings advice on using the disc at any time. It was a pleasure to browse through the Cookbook and get some new ideas from our American friends.



7

Dr Wellman

This medical encyclopedia from Digita Multimedia is presented as text and colourful illustrations. There are a number of chapters which can be selected from the main menu. These cover Emergencies, First Aid, Travelling Abroad, Personal Health and Baby Care among other things. Each chapter gives you a choice of further subjects. It is user-friendly, with a fast search facility and a reassuring help button.

8

World Vista Atlas

One of the first titles we bought, World Vista Atlas is ideal for the school-room or the home. There are maps, facts, music, language, and pictures covering most parts of the world. The maps are large and can be scrolled across the screen. Detailed city maps are available for many major cities. Taken as a country at a time, it could form the basis for a fascinating geography project.



Coming now to the Art and Leisure I opted for the Garden Fax series.



9

Garden Plants

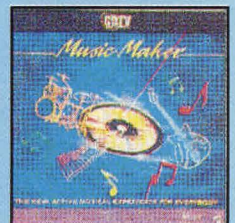
Garden Plants is one in a series of four titles from Intersearch Systems. The others are Indoor Plants; Fruits, Vegetables and Herbs; and Trees, Shrubs, Roses and Conifers. In all four discs the system of search and select is the same. You start with a long list, in the case of Garden Plants there are 475 varieties, and whittle it down by choice of colour, growing conditions, planting time, size and flowering or harvest time. The full colour picture of each plant may be enlarged and full details are given for cultivation and propagation. As there are four titles it would be expensive to buy them all for home use but, used in conjunction with a touch-screen, at a garden centre they would be extremely useful and would save many costly mistakes and disappointments.

In the Music category what else but Music Maker.

10

Music Maker

We have had Music Maker for some time and it is a firm favourite with our friends. There are four sections. Juke Box gives you seventeen tracks of popular music. Play-along gives various ways of accompanying those tunes. With Drum-along you can insert any CD of your choice and join in on the drums. But it is the music quiz which has provided hours of entertainment on many occasions.



As for ten titles which in my opinion did not quite make it:-

Welcome Disk (Booby prize!) — All Dogs go to Heaven — Barney Bear goes to School
Case of the Cautious Condor — Chaos in Andromeda — Hound of the Baskervilles
Hutchinson's Encyclopedia — Mind Run — Psycho Killer — Women in Motion

Rick Longencker, music star of U.S. clubs and Amiga buff, takes a close look at what CDTV can do as a sampling/midi workstation.

Music in the 90's has taken on a new shape. Once consisting of a series of notes, chords, and a variety of timbres, music now has a palette resembling that of today's visual artist. The sounds that make up a growing share of radio airtime consist of "sonic images" or "audio samples", that can originate from a wide range of audio sources i.e. microphone, stereo system, electronic instrument, or video tape. This ability moves the role of today's musician into a new dimension, one in which the user may merge the past with the present, and or alter the past, forging new ways to interpret the future. As you might be able to tell I'm an advocate of sampled sound in music. From its origins in the clubs of urban New York, L.A., and Chicago to its comfortable position on the airwaves, turntables, and CD players of the rest of the world.

Sampled sound in music represents not only a rebellion against the corporate ownership of sights and sounds, but a desire to use sampled media metaphorically; to trigger emotions, make a point, or to stretch the confines of traditional song structure. CDTV, the Trojan Horse of Amiga technology, offers the user all of the versatility of the standard Amiga with the inclusion of a CD player/drive and a MIDI interface, plus the ability to plug into any TV or Stereo system. The key to unlocking CDTV's vast potential is through the computer upgrade kit available from CBM \$199.00 (£135 approximately). The kit consists of a computer keyboard, an external floppy disk drive, and an infrared (wireless) mouse. This addition gives you full access to thousands of Amiga software titles and numerous hardware peripherals.

The two most important tools for the musician using samples in their music/art/multimedia/performance are the pairing of a hardware(sampler) and software(sample editing) package. I like using the FutureSound audio sampler and AudioMaster IV. FutureSound is a parallel port digitizer that gives you a lengthy ribbon cable providing the user access to the input volume slider. There is also a pair of RCA (phono plug) jacks, making it more compatible with most stereo/vcr equipment, these jacks are input only. Stereo samples are possible but usually take up more RAM than their worth, dealing with eight bits, but more on that later.

AudioMaster IV is a very powerful sample editor that offers much more than the ability to cut, paste, and merge various sounds. It also gives you the option of setting multiple loop points in a single sample of a RAM dependent length. Using your samples with sequencers requires that you keep them under the maximum buffer size of 131072 BYTES, complying with the 8SVX IFF standard.

CDTV offers a unique feature, an independent CD player/drive that can be a source to its sample engine capabilities. This is accomplished, in my example, by running AudioMaster from the floppy drive(boot or WB). Once inside AM4, I switch mode to mono and then set my sampling rate (17546,if

you add them up they equal 23, it also gives you the fidelity you need for live or recording situations) the higher the rate, the larger the file.

Next I turn "vox" off (RTFM). Then move the volume slider to its leftmost position, this will prevent a feedback loop, at this point run a line out of the CDTV headphone jack to an input on your sampler, play your CD by pressing play on the CDTV remote or front panel. Click the mouse pointer on sample once and adjust the volume from the remote or front panel then adjust the input slider on the FutureSound until you see the sample waveform filling the sample window without clipping(flattening) at the top and bottom of the window. Click the mouse once more and the screen will go blank and the sampling process has begun. This process is complete when the end of the buffer is reached or the left mouse is clicked again. Once this happens a sample waveform will appear in the workspace behind the sampling gadget you were just using.

To preview the sample, before exiting the sampling gadget, move the volume slider to the right most position and click display to play once or waveform to loop. If the sample quality desired was achieved click ok, if not try again by clicking sample. The next step requires setting a loop point, if you need one for this

sample, you do this by arranging the loop sliders until the desired loop is achieved. Staccato drum, instrument, or vocal samples may not require a loop, in this case save the sample with the loop set to off. Sampled rhythms may loop best when dealing with one and two measure sections, these will also fall well within the 8SVX buffer size. With the ability to play CD's independently from normal computer activity the user may play samples directly over the audio coming the CD, in turn, the user play listen to their favorite audio CD

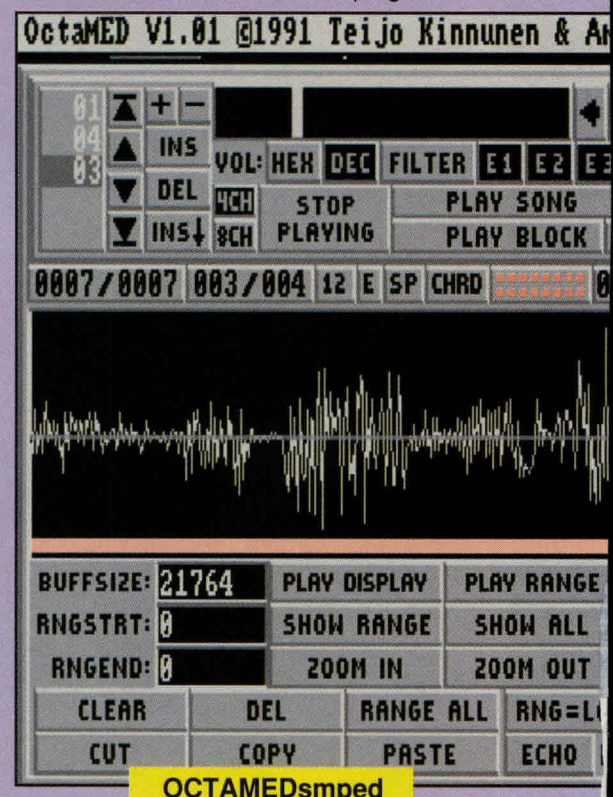
will working on a word processing document or spreadsheet or graphic animation.

Options

Sequencing options may vary, with some sequencers offering good support for the Amiga/CDTV internal sound generating

CDTV: MUSIC WORKSTATION FOR A NEW WORLD.....

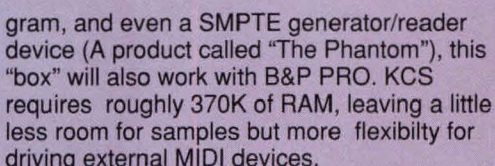
capabilities and others focusing more on support for driving external MIDI devices. Some sequencers, though, offer "friendly" support for both situations. Two inexpensive but well endowed programs are MED or OctaMED, both from the same author, Teijo Kinnunen. These "licenceware" programs are



available for a small purchase price, I believe 25 dollars(About £17. Although these two are packed with features they do have a learning curve for most musicians, having more of a numerical(step time) method of programming. A few additions sorely needed are MICROtonal tuning, for samples, pulldown menus, and a sample editor more resembling that which you find in AudioMaster. One more sharp feature is the realtime sample reverse capability, while seq is playing.

Dr.T's KCS II ver.3.5 is the program, I feel, offers the best "dual" support for driving both external MIDI and internal sampled sounds. KCS provides you with a screen to load all of your samples and assign their MIDI mapping, transposition, and volume. Once again two great additions that would make this program unbeatable, would be MICROtonal tuning and AREXX support. KCS does have a TRACK recording interface that gives you a look at all of its 48 tracks and also enables you to mute and unmute tracks in real time, which is great for live interactive performance. You may also save your progressions as a SONG, or for a broad range of interactive performance possibilities OPEN mode is unparalleled.

Another plus resides in this program's ability to drive patch editors, a notation print pro-



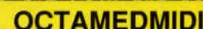
Music Modules is a program that is no longer being sold and was made, by the now defunct MusicComp Technologies, in 1989. This program was probably the first program that gave the user extensive control over



A very exciting product that is currently awaiting FCC approval is a 16 bit sampling board from a company named Beta Unlimited Inc. of Brooklyn, New York. The board is called the "AudioLink" and should have a retail price of \$1295 (About £850). This board is directed at AMIGA 2000 and 3000 owners but will also be available as an external device for the 500 and CDTV. Some of the features include 16 voices in mono, 8 in stereo, 16 individual or stereo outputs, and comes with 2MEG on the unit but is expandable to 16MEG internally. There is also forthcoming a direct to disk transfer card to be used as a Hard Disk Audio System.

CDTV opens up many more possibilities, pushing the practical uses for a MULTITASKING MIDI/SAMPLE WORKSTATION to an unprecedented plateau. A new, new standard taking advantage of CDTV's MIDI ports is CD+MIDI pioneered by Warner New Media, known for their strong efforts in the CD+Graphics arena. Future applications are sure to include CDs by most popular sequencer manufacturers with multitasking sample editors, patch editor/librarians and numerous tone banks or

DCTV can also be used as a computer for telecommunications, print, and video tasks, and comes complete with a serial port, a parallel port, an expansion slot (for a future hard card, a SCSI port, and possibly an ethernet port), and a video slot (the unit comes with a RF, S-video, composite modulator and there is an optional genlock module for overlaying graphics and animations on video fed in to the module). There should come a device for this video slot that could rival the revolution that has occurred in the professional video market (ala Toaster, DCTV, HAM-E, etc.). The versatility of this, machine alone makes it worth the under £500 price you would now pay.



CDTV is an not only revolutionary, but evolutionary making its worth that much greater because of its existing compatibility with AMIGA technology and the plethora of multitasking software packages available. Well over a million AMIGA 500s are ready to take advantage of the A570 (in Europe) and the A592(in the U.S.) CD drives for the expansion bus. These drives are fully CDTV compatible and will drive the CD based software markets to unprecedented heights. I feel the main benefactors to this technology's proliferation are the people who are using and learning from these types of tools. Bless the beasts and the children! And Praise Bob! And Commodore, of course too.

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The Shape of Things to Come?

Interactive media are being predicted to bring about a revolution in the home, to replace both TVs and computers. That is because they are said to combine the best of both those worlds. They can or will give all the passive values of television: colour, movement, sound and are an excellent entertainment medium. They also offer tremendous opportunities to do what TV or Video cannot do, drag the viewer right into the action.

Commodore Dynamic Total Vision, to give CDTV its full name, is the first to appear in the market. And in the world of technology it is often the one who takes the lead that wins out. CDTV also has the enormous advantage of being based on a well-established software foundation - the Amiga. That means developers are already familiar with the largest part of the requirements for creating programs for its operating system.

There is also the huge potential of the actual Amiga market around the globe which will be able to acquire the means to use CDTV software. That user base is predicted to reach

4,000,000 this year. No other interactive multimedia machine is going to achieve that size of market very quickly. Commodore too has extraordinary experience in winning world consumer acceptance for its products.

As CBM's Chairman Irving Gould recently said, it is what you can do with the machine, the software, that will make it acceptable or not for the general public. There is no doubt that the hardware is easy to use. And more and more CDTV programs of all kinds are appearing fast. "The Shape of Things to Come", electronically speaking, may well indeed turn out to have the form of a compact disc but it may also be in a black box that Commodore like to call "Nothing Short of Revolutionary".

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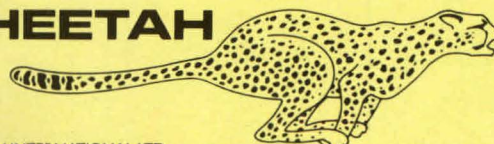
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Something wonderful is happening!

Multimedia, that exciting combination of electronic devices like the computer, video, sound etc, is going to make an increasing impact on our world. In the home, at work, in entertainment and many other areas - multimedia players will bring a new electronic dimensions to our lives.

Amigas will be in the vanguard of the development as in the CDTV which is really an Amiga black box development. The Shape of Things to Come is the first AUI major feature on this fascinating new dimension.

However, Amigas - and Commodore - are not the only way that multimedia will reach out and touch our lives. Next month we will be looking at other areas where multimedia is already making an impact.

Watch out next month in AUI for 'Multimedia Now' where we show you how imagination becomes reality.

Something wonderful is happening!



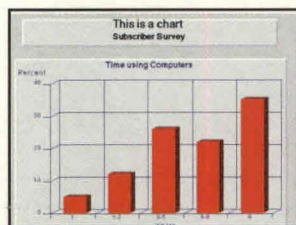
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Ashton-Tate, Cray, Wrangler Jeans and Smart Mines? What the Photon Paint

OXXI have all these got to do both sides of the pond with

the Amiga? Mike Nelson investigates a transatlantic Amiga connection.

Based in Long Beach, Los Angeles, Oxxi, a leader in the Amiga productivity field, are perhaps better known by the companies they have taken over, rather than by their own name. Perhaps the most famous of these takeovers is Aegis, makers of such old gems as Sonix and Lights!



XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Camera! Action! Recently, however, Oxxi's attention has turned to the U.K. company Precision, taking on board both their distribution arm and, perhaps more importantly for

Commodore, the Amiga version of the best database around, Superbase. Precision's PC-Windows product had already been sold to the California-based Software Publishing Company, an impressive export for this PC database is the preferred database of the US Government and Defence people and was rumoured to have brought the Tranners, then owners of Precision, a cool \$25 million.

Buying up companies and their products is all well and good, but Oxxi are also one of the premier developers of Amiga software on the planet with some key packages in the Aegis line. Sonix may be a bit long in the tooth, but it's still pretty popular and good fun. Audiomaster IV and its accompanying digitiser, SoundMaster, however, represents the standard sound editing package against which

all the others are compared, often unfavourably.

The most recent release from Oxxi is, in my opinion, one of the best and most promising Amiga programs to date, and that is Presentation Master.

An Interesting Life

Oxxi was founded by its current President, John Houston, in Autumn, 1985, with the declared intention of developing productivity software for the emerging Amiga and also Atari ST ranges of computers (although the latter never really took off in the US). John has had an interesting life, having photographed for National Geographic Magazine, raced cars (for which he was sponsored by said jeans company), worked with Seymour Cray (of Cray Supercomputer fame) and owned a string of restaurants and other businesses. The only thing John Houston appears to have missed out on is Editorial Assistant at AUI! (Though the offer is open! Ed.).

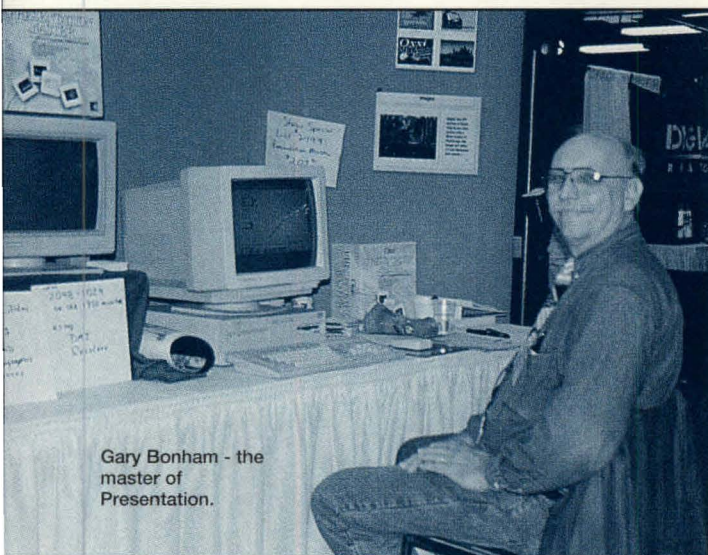
- Their first release**
- was a spreadsheet**
- called MaxiPlan**
- which, in addition**
- to receiving an AUI**
- award, became one**
- of the top 10**
- Amiga programs.**

John's background in electronic engineering and programming eventually gave way to managerial roles in marketing, product support and development. 10 years ago he was asked to fulfil these jobs with Ashton-Tate and very soon this powerful combination had whipped "dBase" into shape as the industry standard database. John remained there for three years until the company went public before he left to work around the Amiga and start Oxxi.

With all this experience, and

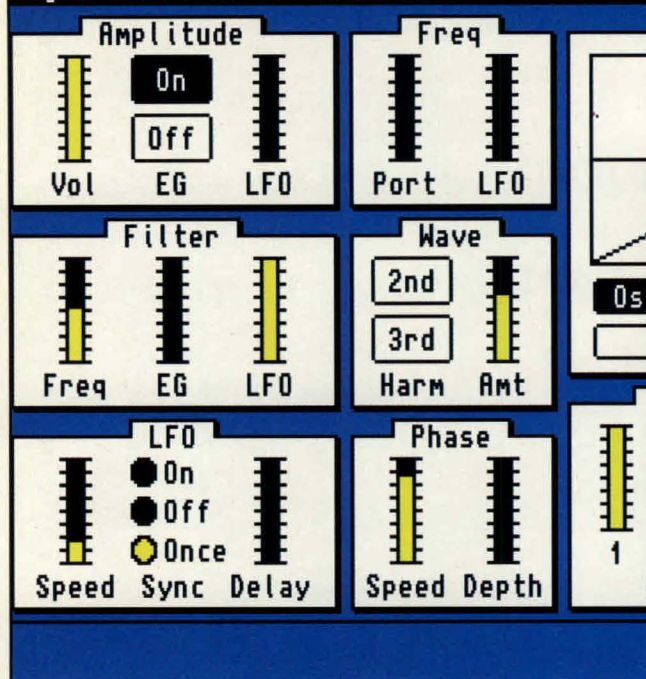
also wife JoAnn at the helm of the accounting, Oxxi was a good bet in this brave new world of colour graphics and sampled sounds. Indeed, their first release was a spreadsheet called MaxiPlan which, in addition to receiving an AUI award, became one of the top 10 Amiga programs within two months of its release. Things proceeded nicely with several American releases for accounting and such like and in 1987, Oxxi had the foresight to develop a "strategic alliance" with the equally foresighted Commodore, and this close relationship is stronger than ever today.

A-Talk was developed next and this went on to become one of the most popular telecommunications programs on the Amiga. November 1989 saw Oxxi taking on board around 30 products from the ailing company, Aegis, which also allowed them into the worlds of PC and Macintosh machines. This acquisition almost doubled the size of Oxxi but was not enough, so two more



Gary Bonham - the master of Presentation.

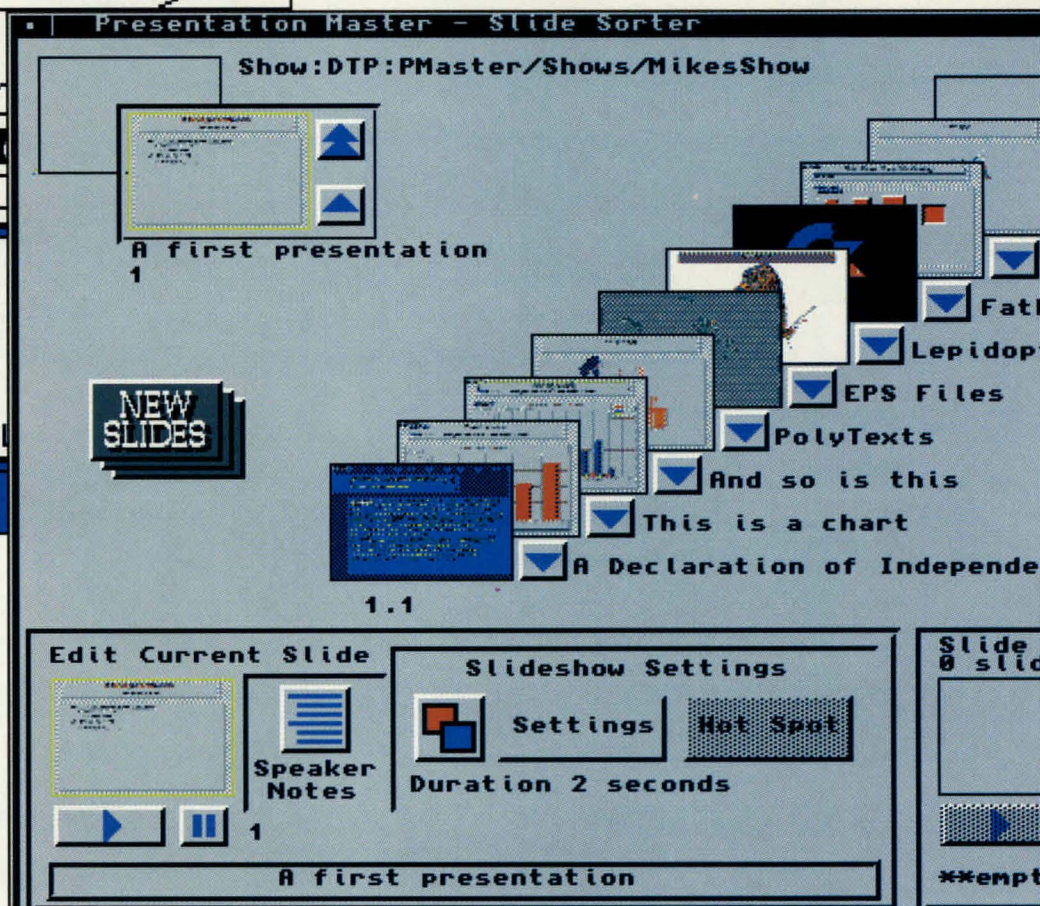
Hegis UNIX V2.0 - Unnamed



"The future for the Amiga is simple:

Commodore need a new machine with

better graphics."



smaller companies were purchased, PAR Software and Glacier Technologies, both specialists in the graphics fields. These takeovers of companies in trouble were as much for the staff working there as for the products already on the market or in development.

Oxxi were now developing and releasing both new products and upgrades to existing ones. Famous programs like TurboText, Photon Paint, Sonix, Audiomaster Modeller 3D and VideoTitrer are just a few of the almost household names which owe their existence to Oxxi. Since acquiring the licence from Novell in 1989, Oxxi have been working on the Amiga Client Software so that our beloved machine can now sneak into this standard PC networking environment which is also used by Macs and UNIX machines.

A Totally New Amiga Program

In 1990, a new Director of Software and R&D, Gary Bonham, joined the company to continue to develop a totally new Amiga program, now released as Presentation Master. Gary's programming expertise dates back to the heady FORTRAN days of the 1960's, where his work in the field of Astrophysics at UCLA first involved him with computers. After completing his degree, Gary worked at Douglas Aircraft writing code to simulate and analyse early space missions, and also various defence projects like "smart" mines.

A few other defence-industry jobs later

found Gary working at a company called SPARTA who were closely involved with the trendy Star Wars research of the Strategic Defence Initiative, and it was the making of videos to sell this idea that first introduced the Amiga to Gary. He used the

genlocking facility and wrote code to produce the fancy animations of satellites zapping the daylights out of those nasty Russkie missiles. Much of this code found its way into commercial products such as VideoTitrer 3D and Lights!

standards, the ANIM. This, as the name suggests, is the ubiquitous format for "cel" animations in which a succession of pages is displayed; the illusion of movement is given by each frame differing slightly from the previous one. The clever thing about ANIMs is they have an in-built compression algorithm which helps keep the files reasonably manageable.

While at SPARTA, Gary noticed a gap in the Amiga's formidable graphics arsenal, namely the field of presentation graphics. Sure, the PC had Harvard Graphics, the Mac thing had Aldus Persuasion, but the Amiga, with all its fine graphics potential had only a product called Aegis Impact which they weren't really interested in upgrading. This was back in 1989, before Oxxi were in on the scene.

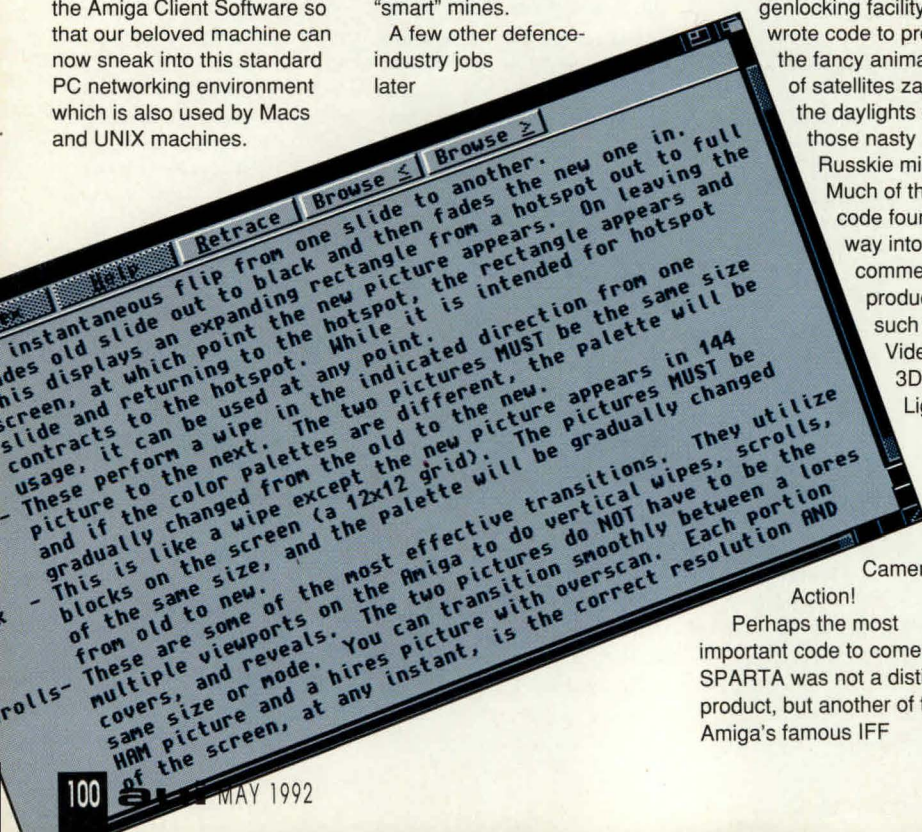
Gary told me about the birth of Presentation Master: "When Aegis weren't keen on upgrading Impact and I'd looked at the code, I decided it was a lost cause anyway, so I started to work in my own time on March 5th, 1989. The date sticks out! Within a month I'd

got the basic interface and overall front end of the slide sorter so the program was at least in a demonstration form. I was still at SPARTA and they supported it for a while, but it grew and so I moved over to Oxxi to continue in 1990"

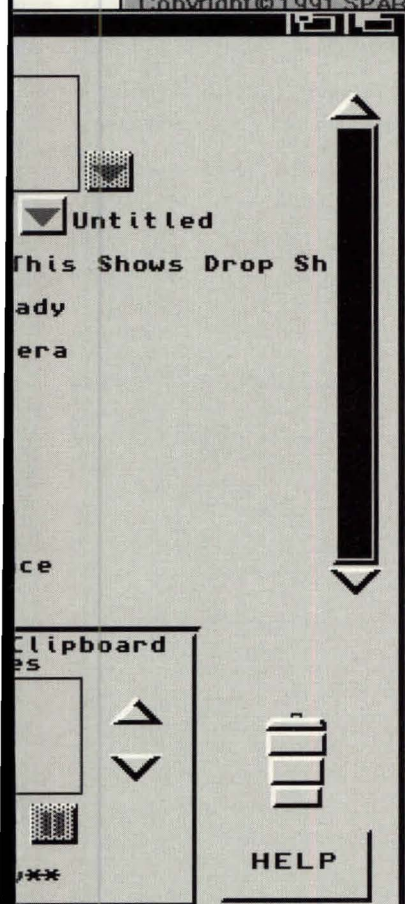
Over 880K Long

At the time there was no significant competition on the Amiga and Gary is still surprised to this day that this has remained the case. I think it is due to his undeniable modesty when you step back to consider the effort that has gone into the product:

"The main program is over 800K long and the modules take up another three floppies. It's written in a very modular form so it's easy to add in new features without having to upgrade the entire program. If I write something new like a different graphing type, all the user needs do is run an installation script which copies the new code into the right directory on your hard disk. The main program then looks here and adjusts its internal menus to include the new feature automatically. It's a bit



Perhaps the most important code to come from SPARTA was not a distinct product, but another of the Amiga's famous IFF



like ADPro in that respect - Pery and I discussed modular programming way back"

Does that mean Presentation Master and ADPro will talk to each other? "It's in the pipeline to have a link between the two programs so we can use ADPro to output to a lot more devices. We may even be able to do image processing - it depends what makes sense at the time really".

Gary wrote all the code himself so I asked him several questions about this, including his thoughts on 2.0 and the Amiga's hardware:

"Yeah, all my own work! I don't know if I'd have tackled Presentation Master if I'd known how big it was going to be. It sort of grew and we had to put certain features in. Sometimes you may add something seemingly trivial but the extra code generated is phenomenal. Presentation Master needs a lot of memory because it tries to avoid re-rendering the screen to save time. This means lots of buffers and memory management routines. With regard to 2.0, I was developing way back when it was called

1.4 so the program evolved with the OS. It didn't cause me too many problems as I haven't used any 2.0-specific features. I'd like to have used the standard file requester but it doesn't run under 1.3 and we had to make the program compatible with the older version.

I hope it's not too long before we can write 2.0-only code. The reality is there's a heck of a lot of 1.3 machines out there, but I think the majority of Presentation Master users will have A3000s and so be 2.0."

"The Amiga's hardware is getting old now - we're still using the original graphics modes from '85. 386 and 486 PCs are doing well under Windows and companies like Digital Micronics are coming up with high resolution devices which are great, but they aren't the lowest common denominator. The standard Amiga must have at least 8 bit colour with 24-bit RGB values. Applications like Presentation Master don't need full 24-bit graphics although this is easier for the programmer as you don't have to calculate dither values. We are, however, working with people who are working on solutions to that problem and I want to see the Amiga really take off in the high end as well as continue to sell to games players. The future for the Amiga is simple: Commodore need a new machine with better graphics."

What sort of added goodies will we see in upgrades to Presentation Master?

"We really wanted to get the product out there and see what the reaction of the people is. We'll work according to their demands. The response has been great so far. People who are used to Aldus Persuasion coming along and

saying they want their companies to get Amigas so they can change to Presentation Master as they like the interface and object drawing better. This was very much the aim of writing the program and Commodore were very helpful in supporting us with beta testing and suggestions as to its direction."

"We really hope Presentation Master will push the Amiga into the corporate marketplace and it was designed deliberately to have all the significant features of the competition, and the competition was not on the Amiga. Each of the others has their own strong points like Harvard has lots of graphing types, Persuasion has an integrated outline [for planning your presentations]. We'll be including those soon."

"In the next edition you should see ARexx - it just wasn't a number one priority for release 1.0. We're looking to add more support for video and animations - more than the ANIM at present. High resolution graphics boards like the Resolver are another feature I'm working on at present and also playing sampled sounds from Audiomaster."

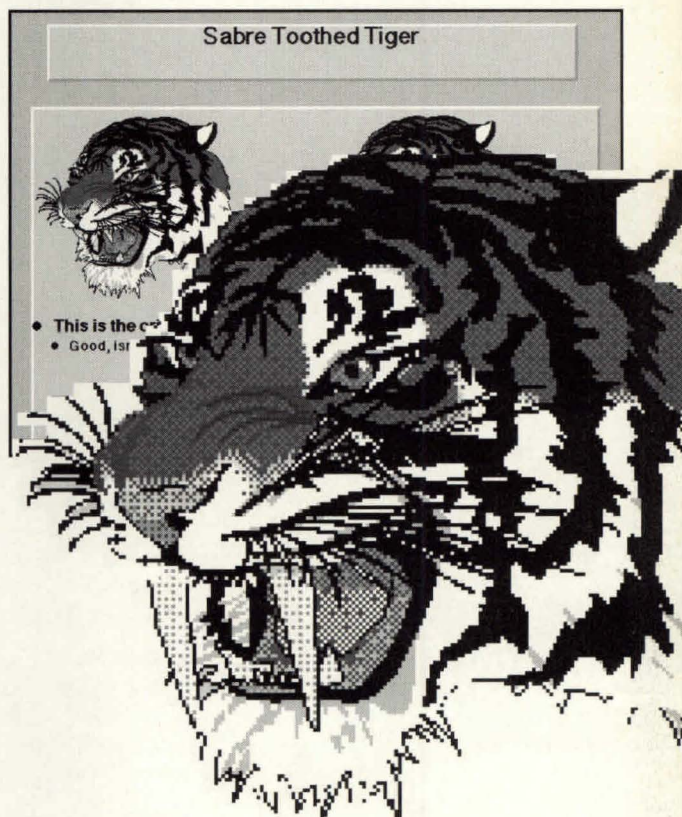
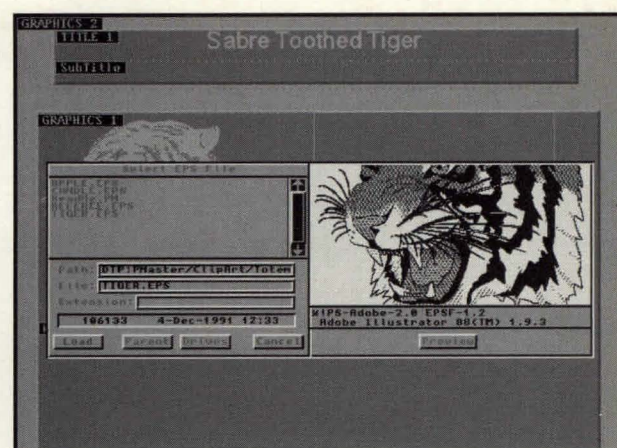
What about Oxxi's other activities - Networking and Superbase?

"As you know, we've just acquired Precision in the UK and also the distribution

company. Superbase for the Amiga will continue to be developed - we have people working on it right now but I don't know exactly when you will see a release. They're doing a Personal version and also a networking

edition just like the Windows product.

The future in serious areas really depends on networking - anyone with lots of computers is going to have them linked and Novell is the system of choice on PCs. We now have the software to integrate Amigas into the network and in our office we have Macs, PCs and Amigas all joined together on the same network. It works really nicely. Superbase will be



able to run on an Amiga and share a common database stored on a PC - that's the way it should be."

Other Products

Although Oxxi's biggest products are important for the Amiga, some of its less extensive ones are no less vital for the users. Visionary, to be reviewed next month in AUI, is an adventure writing program which takes a lot of the drudgery out of coding adventure games, allowing you to concentrate more on the game play than actually programming it all. Audiomaster IV is out looking for revenge over Audition from Sunrize with some really nice new features like oversampling and a few extra real time effects. In total, Oxxi have released eleven new products or upgrades in the space of one year. Currently in

development is a powerful statistics package for those into regression analysis and cluster analysis.

The Novell client server will have Voice-mail facilities added so that users with a digitiser will be able to get their Amiga to answer the phone and record the message when they are elsewhere! Spectracolor is also due for a low-cost upgrade sometime this year too. Altogether, OXXI has emerged since the days of the A1000, as one of the most powerful influences on the Amiga. Today, its range of productivity and professional level products are keeping up with the growth of the Amiga as a serious machine. And Oxxi are clearly laying down the plans and developing the products that are intended to keep them a leader for the Amiga in the Nineties. **a**

The clever thing

about ANIMs is

they have an in-

built compression

algorithm which

helps keep the

files reasonably

manageable.

turboprint

Now he has the instructions

in English, John Walker

reviews this aid to better

quality printing.

One of the good features of the Amiga is that its Workbench is provided with lots of printer drivers covering most of the popular makes of dot-matrix, ink jet and laser printers. One of the annoying features is that some of the printer drivers aren't as good as they should be - as anyone who has tried to print a page larger than 8 x 10 on a HP LaserJet will know. Commodore recognised the failings of the original drivers and attempted better control in 1.3 Workbench, but the improvements didn't go far enough. Now with TURBOprint Professional, you can customise the Amiga's printing to your own requirements. We have reviewed TurboPrint before when it was only in a German version. Now it has English instructions and should be generally available. and the latest version offers more than ever. Four packed full-screen menus make the options available from the Workbench's own graphic printer preferences look inadequate. The program replaces the Amiga's normal printer drivers, although it will also work with 1.2 Workbench drivers, but not with the 1.3 ones.

Mirrored Print

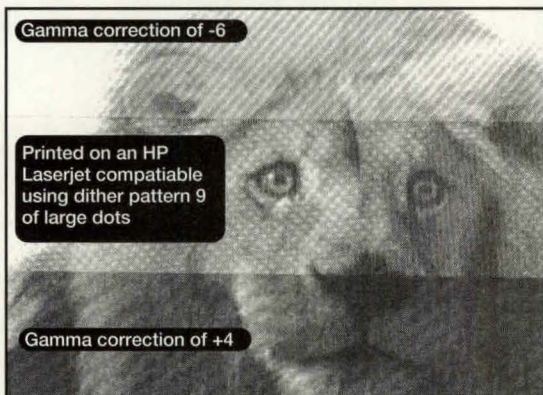
It offers 12 different dither patterns for printing graphics, two smoothing functions to improve the look of printed text and can pr

int vertically or sideways (though not with PageSetter II). It can print pictures in poster size - up to 8 x 8 (which equals 64) sheets of paper. It can do mirrored print, which is useful for designing your own T-shirts or producing transparencies for overhead projectors. It can also minimise the banding that often appears on dot-matrix prints and provide colour separations and colour correction. It includes more than 30 printer drivers that cover most popular makes of printer - Brother, Canon, Epson, Facit, Hewlett Packard DeskJet and LaserJet II, NEC, Oki, Panasonic, Seikosha, Siemens and Star. There are drivers for Canon and Star laser printers that are not available elsewhere. Other printers, such as the Citizen 9 and 24 pin dot-matrix, the Fujitsu 9 and 24 pin, the Panasonic 9 pin, Commodore's MPS 1000, 1500 and MSP 2 series, and IBM and LaserJet compatibles will also work with the supplied drivers.

Only 30K

The program, once loaded, can work in the background or summoned up by a couple of key presses for changes to be made. In background mode it occupies around 30K of RAM and works quickly and efficiently, particularly when using its own routines via the Amiga's parallel port - though you can, if you prefer, attach your printer to the serial port. All is not wonderful,

though. TURBOprint comes on a single copy-protected disk which can be installed on a hard disk or copied to a floppy, but still needs its original disk inserted whenever the program is run.



This is a bore even though it is understandable as a precaution against piracy. An unprotected copy of the program is available to registered users from its German publishers, but at an extra cost. And the program is not bug-free. At times, it brought all operations to a grinding halt so that the computer had to be re-booted. Worst of all was my experience with its 'snapshot' facility for printing screens or saving them as standard IFF graphics with three key-presses. This gives you a choice of printing or saving the whole screen or cutting out a portion of it using cross-hairs. I was saving screen shots to illustrate this feature. There was no problem with the first three. But the fourth time I did it, TURBOprint caused a complete crash and so corrupted my disk that merely putting it in a drive was enough to cause further crashes. When I was eventually able to examine the disk, I found that it had not only been renamed - to

Professional

Turboprint, natch - but that four directories and 40 files had been deleted and most of the disk overwritten with garbage. No virus has ever done as much damage as TURBO print did. I hope this was an exceptional occurrence.

Graphic Dumps

But to return to the good news: TURBOprint can greatly improve the quality of your graphic dumps. It has a good dither pattern for 9 pin printers that gives results with great detail. It has three dither patterns of horizontal dots of increasing

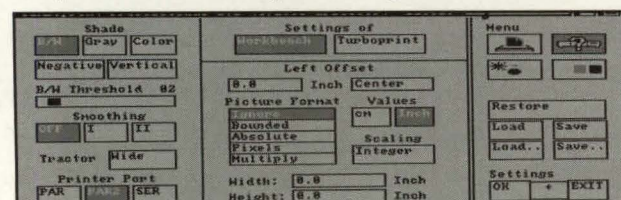
sizes, three of diagonal dots of increasing sizes and three of diagonal stripes of varying thicknesses, which can also be rotated by 90 degrees so that the stripes go from left to right rather than right to left. You'll need to experiment with these to discover which best suits

your printer but they can bring excellent results. The larger sized patterns work best at high resolutions. Tractor-fed printers usually produce black or white banding in graphic dumps, caused either by each run of the print head overlapping or not quite meeting. TURBOprint has a Line Gap Correction function to alter the amount of the printer's line feed on each pass. Again, you'll need to experiment to find out whether this will benefit you, since no two dot-matrix printers are quite the same. I found it improved the appearance of hard copy from my 9 pin Epson but didn't seem to have any noticeable effect when used with a 24-pin Star - when I tried to get

rid of a slight overlap, I got white banding instead. In order to further get rid of banding effects, the program can be set to print with only half or two-thirds of the pins. This can produce better results, but at half the speed. Especially useful is the program's Gamma correction, a function you'll only find elsewhere on ASDG's The Art Department. What this does is alter the brightness of the shades of grey between black and white without changing the black or the white. It can improve under- and over-exposed images without recourse to brightness or contrast controls.

Colour printing

TURBOprint is also an aid in colour printing. You can produce four colour separations, though I wouldn't recommend it. For such professional results, you really need a DTP program such as Professional Page with its Pantone colour matching. But the program's colour correction features make it easier for anyone to ensure that their prints match closely to the colours on the screen. TURBOprint works with all the popular Amiga graphics programs and, indeed, you should have no compatibility problems with whatever program you use. Its poster-making won't work properly with Gold Disk's PageSetter II or Professional Page because of the way those programs output their graphic information, but I found no other difficulties. If you need hard copy and wish you could afford a better printer, then TURBOprint may be a cheaper answer to your needs. If you can live with its awkward copy protection and its ability to freeze the computer or trash the occasional disk, then it's an investment that is well worth making.



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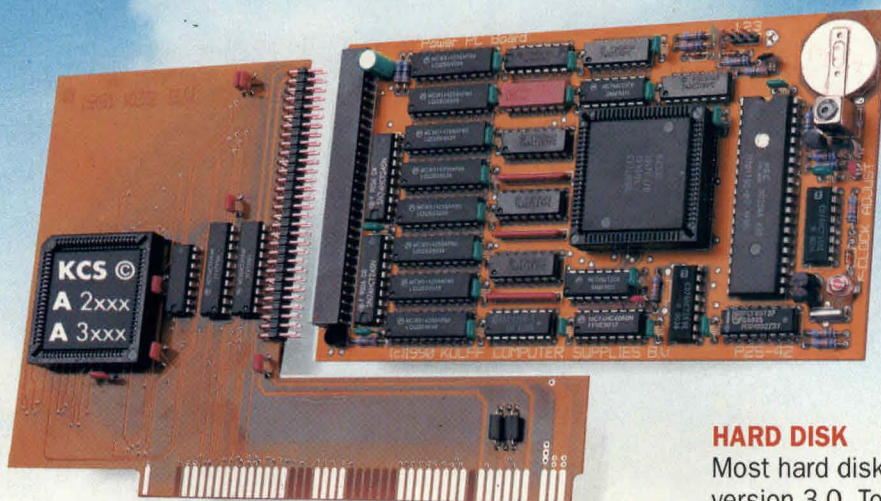
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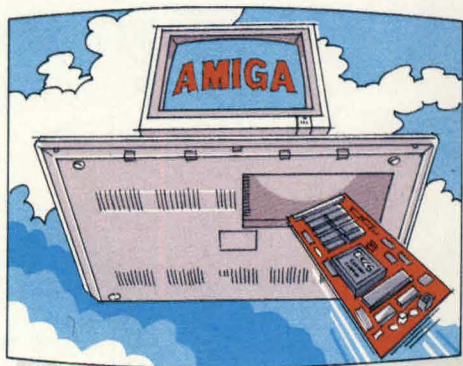
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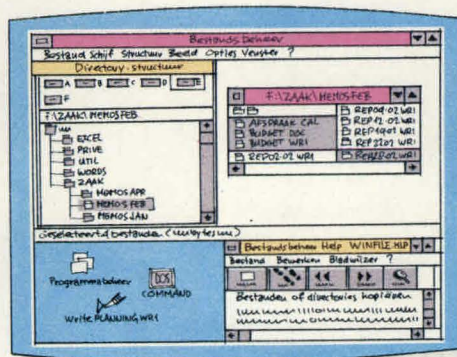
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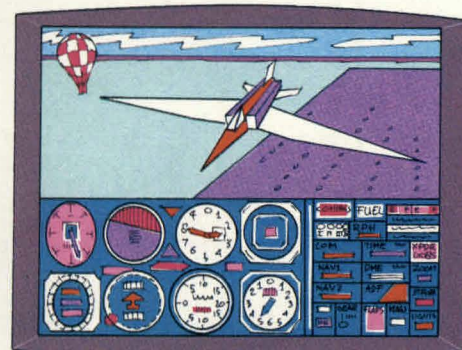
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drives two samplers at different ends of the market but from the same manufacturer.

Probably everyone plays with the 'Say' utility on Workbench after buying the machine, but then equally probably never looks at it again. It's only the game intros and samples (who can forget a Lemming's heart-rending 'Oh No!') that let you know there's a whole world out there - go get 'em M. C. Amiga!

This is where the sound samplers come in, as most of us do not have the necessary musical background to write anything more than white noise. Samplers are able to 'grab' snippets of any input to them, usually from a source such as a CD or tape deck, but sometimes a microphone. This may then be manipulated digitally, without detriment to the sound quality.

Two recent additions to the throng are Stereo Master and AMAS 2 - both from Microdeal. The former is a budget sampler, and effectively a direct replacement for one of

Hardware and Software For any sound sampler, the first thing you must realise is that there are two components - the hardware and software. The former usually consists of a small metal or plastic box that plugs into the serial or parallel (or even sometimes both) ports of the computer.

This is where your sound source goes in, and as mentioned above may be either straight from a microphone or off any recorded or broadcast medium. Compact discs are a favorite medium to sample, as they are already noise-free (unless you listen to Kylie Minogue, of course). Excellent samples can be taken from the most low fidelity of sources, however: some I've taken are straight off FM radio. The hardware of these two offerings is very different, and so will be examined separately.

The software side of any sound sampler is critically important, as it is this that you'll have to deal with in order to obtain, edit and sequence your future number one hit. As both Stereo Master and AMAS 2 come from the same stable, the software is common to both (apart from the sequencer, as AMAS 2 supports MIDI).

One of the fundamental choices on offer is whether you want mono or stereo. This is not as silly as it sounds, as the true mono samplers (or those with this option) are able to increase fidelity and

The

delegate more RAM to a sample, so it can be much bigger (but remember that the hardware as well as the software needs to be mono or stereo). The Microdeal samplers and program supplied is stereo, and although you can 'turn off' either channel, the RAM it lives in does not appear too liberated to be given to the remaining mono channel.

The next important point is the sample rate, as there is always a trade off here. This is the number of times per second that the software 'looks' at a musical waveform, so to go for a high sampling rate gives a high definition sample, but greatly increases the size in terms of memory. This software allows a sampling rate up to a creditable 55.9 kHz mono (27.9kHz stereo), and also lets you re-sample an existing waveform so it takes up less space.

editing

The next thing to think about is the ease of editing of the samples, as no amount of fancy special effects are of any use if it's all too complicated to use. Most programs of this sort edit samples in the same way that word processors edit text - via functions such as cut, copy, paste and the like. As is now standard, all of these functions

art

of

SO

are carried out on a graphical representation of the waveform (basically amplitude versus time). This is perhaps not as well implemented as with some others, for there is no real capacity to set a range other than with the start and end flags. Audiomaster, for example, would let you define a range independently of the start and end points of the sample. If you've never seen any other program, this probably won't be a problem, though. What may be so, however, is the speed of the editing functions; this is a very slow program to use. On top of these functions, there is then the capacity for audio special effects - echo

"For the rest of us

musical dyslexics

a very nice little

sequencer comes

with either

sampler."

(echo..echo..), chorus (three or more voices signing the same thing), phasing (a posh name for a sort of 'woosh!') and the like. These are very well supported by this software, as unusually most can be applied in real time, as the sample is being acquired.

They may also be added to samples already existing as well, if required.

Special effects such as explosions can be given extra



the original low-cost models, Mastersound. The latter is also an update of an existing Microdeal offering, amazingly enough called AMAS. AMAS has always been the more upmarket offering; a relationship unchanged between the new programs. Let's see what they have to offer.



INFO

price: AMAS 2 - 99.95 StereoMaster - 39.95

contact: Contact: Microdeal, PO Box 68, St Austell, Cornwall PL25 4YB Tel: 0726 68020





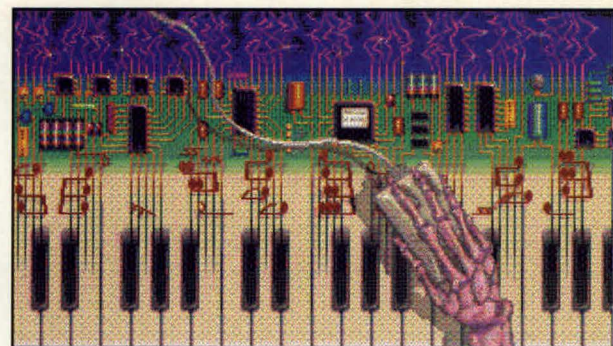
depth, or voices can be altered to suit your needs or taste. For example, Granny can sound like a Dalek on acid, or Jason Donovan made to sound like he can sing. Other facilities let you control the two channels separately, so mono samples can easily

spectrum analyser, whilst the other is a Fourier analysis of the sample in memory. Both are very pretty, but I feel of no practical use in the real world!

MIDI Interactive

As mentioned above, AMAS 2 has the capacity to interact with a MIDI device such as a keyboard. For those determined to assault the charts with 'Amigapop', then this will be very useful indeed. Otherwise, for the rest of us musical dyslexics a very nice little sequencer comes with either sampler. This is a sort of

would be a much better idea. AMAS 2 comes with a single microphone, a pleasant touch which really helps you to get in the mood straight away! Its construction is very different to that of Stereo Master, having two ribbon leads that come out of the sampler, one each for the serial and parallel ports. The main body of the device is a lightweight plastic wedge about 10cm square, with sockets on it for MIDI, the microphone, and Left and Right phono leads - much better than the headphone jack. Here I come to a couple of relatively minor



doesn't have a monitor sitting on it they'll be adequate (just), but for me AMAS 2 ended up on end poking out of the back of my machine. The only other niggling point, especially true for AMAS 2, is that they block the serial and parallel ports. If your computer is any thing like mine, then going behind it into the jungle of leads and cables is a major expedition requiring half an afternoon and a machete. As I use both ports for other things, the sampler with no pass-through port can definitely not be plugged in and left.

conclusion

Both of these give all that you need to get up and running in the heady world of

"Granny can sound like a Dalek on acid."

sampled sound. AMAS 2's support of MIDI is useful if you're suitably musical, but the ability to sequence straight from the computer keyboard is an asset for anyone. The odd choice of 3.5mm plug on Stereo Master is a bit of a nuisance to those with the desire to sample off their ghetto blaster or stereo system, but it remains good value nonetheless. Both offer a creditable chance to enter the fascinating audio world of the Amiga for a relatively small sum. **a**

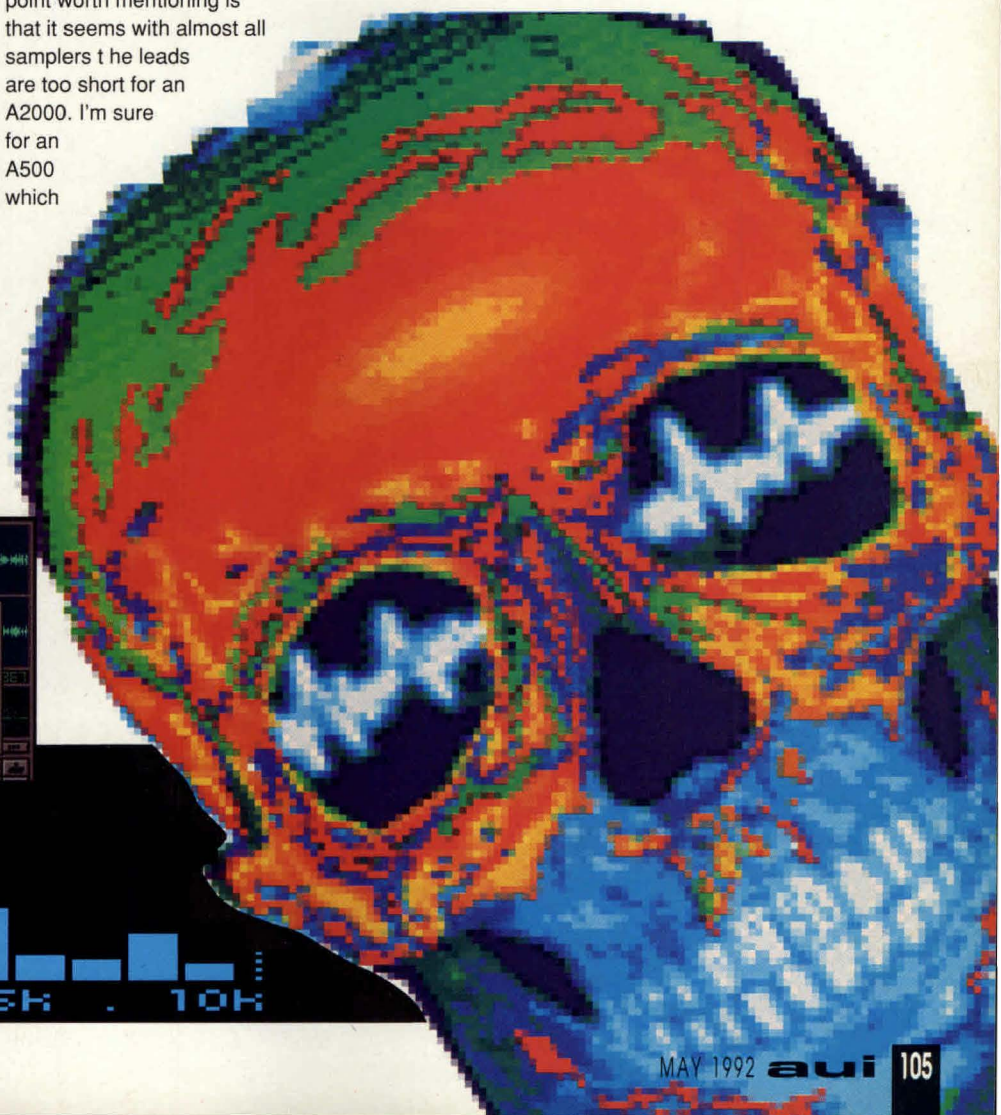
be made to fade across the stereo stage. Mostly, however, it is quite difficult to guess what these effects will do; a trial run on an incoming sound is therefore supported. Another nice touch is the ability to save any changes you make to an effect to a series of user-definable keys supplied for this purpose. All the usual support is given to loading and saving your samples; they may be in various formats: Raw, IFF or executable. The latter is rather agreeable, as it allows the sample to be played just by calling it from the Shell or Workbench, that is there is no need to load the sampler itself. Call me fussy if you will, but an irksome point here is that the file requesters don't respond to a double click to open a file. Otherwise, they are clear and self-explanatory.

The software of both samplers also has a curious ability to draw graphs; one is a dynamic bar chart, like a

controller which joins together lots of separate samples into a tune, so, for example, a drum sample may be played over and over on one channel whilst other lead instruments are set to play on the others. It is, in fact, fairly easy to put together a creditable effort in no time at all - Two Unlimited must have an Amiga.

From a hardware point of view, the two samplers are very different to look at - Stereo Master is a very small box designed to plug straight into the Amiga's parallel port, with a single lead coming out of it. This unfortunately ends in a silly little 3.5mm jack, of the sort usually used only for Walkman headphones. Proper industry-standard phono plugs

disadvantages of both; neither has a hardware gain control to allow the incoming volume to be adjusted. This is instead all done by the software. Another point worth mentioning is that it seems with almost all samplers the leads are too short for an A2000. I'm sure for an A500 which



Some things are worth waiting for ...

HiSoft Devpac 3

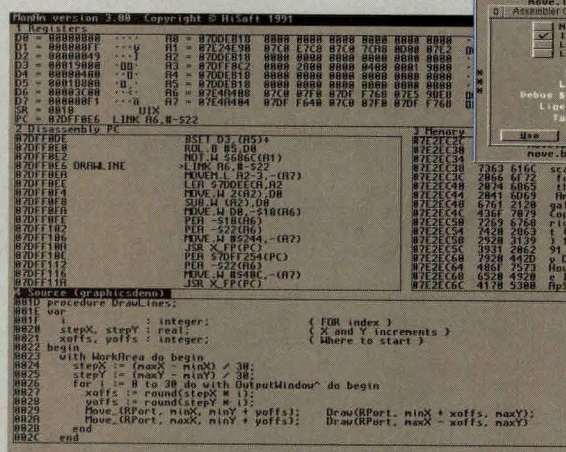
Devpac Version 3 is here at last. The two earlier versions of HiSoft Devpac for the Amiga set a standard in 68000 assembly language programming which was hard to surpass, but we think that we've done it. This new package has had a complete face-lift, from the editor through to the debugger; in fact so many features have been added and improved that we feel confident in the claim that Devpac 3 is the ultimate assembly language development system on the Amiga ... for now!

The Editor

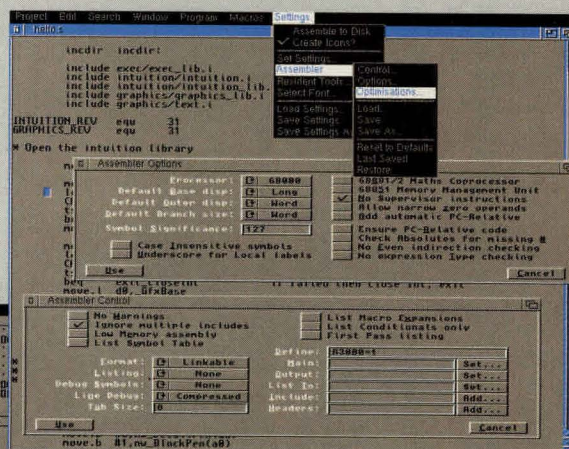
A new multi-window editor with bookmarks, mouse block-marking, macros, complete window flexibility (including multi-views on one file), extensive user configuration and full integration with the other Devpac programs. The editor makes use of Workbench 2 or 1.3 automatically.

The Assembler

Improved and extended, the Devpac 3 assembler is now at least 40% faster than its predecessor (without pre-assembly), supports the full 680x0 range of processors including the maths co-processors and has a tremendous number of switchable optimisations. With the ability to pre-assemble files for inclusion, it can now claim to be the fastest assembler on the Amiga.



the debugger supplied with both packages



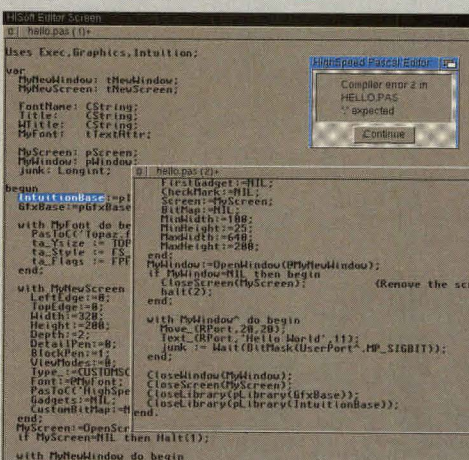
Devpac 3 gives complete control over the assembly process

The Debugger

Devpac 3 is provided with a versatile debugger/disassembler for bug hunting and ease of learning. You can have as many views on your program as you like, including its source code; then set breakpoints, single-step instructions etc. even at a source code level. Again, there is support for all the new processors and the floating point chips.

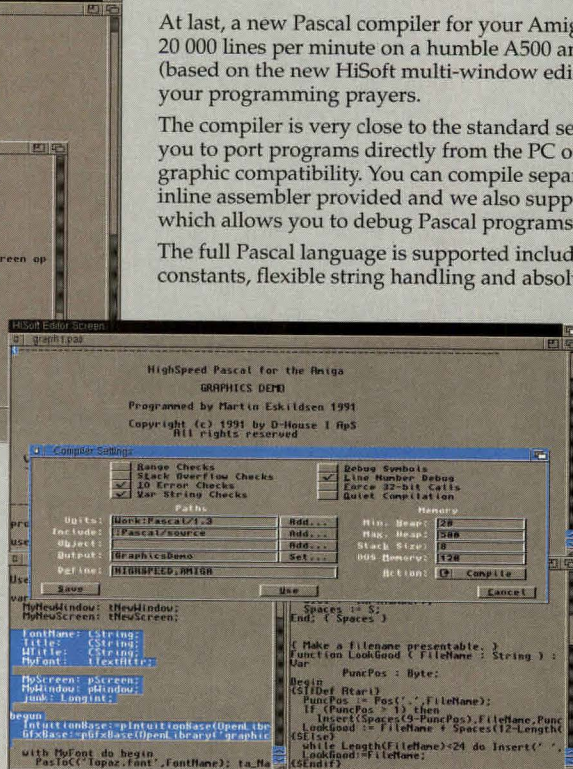
Devpac 3 comes complete with all the necessary include files, a linker, many examples and a clear, helpful manual.

HighSpeed Pascal



error detection is fully interactive

HiSoft Devpac 3 (£69.95) and HighSpeed Pascal (£99.95) should be available at your local computer shop now. If you have difficulty locating a copy, you can order directly from HiSoft by telephone using Access/Mastercard, Visa, UK debit card (Switch etc.) or by post with a cheque/postal order. Mention this magazine when ordering to receive a £10 voucher redeemable against future purchases from HiSoft.



HighSpeed Pascal is remarkably friendly and easy-to-use

At last, a new Pascal compiler for your Amiga; HighSpeed Pascal. Compiling at close to 20 000 lines per minute on a humble A500 and with a fully integrated environment (based on the new HiSoft multi-window editor), HighSpeed Pascal is the answer to your programming prayers.

The compiler is very close to the standard set by Turbo Pascal 5 on the PC and enables you to port programs directly from the PC or ST - even the BGI unit is provided for graphic compatibility. You can compile separate units, link with assembler or use the inline assembler provided and we also supply a special version of our 680x0 debugger which allows you to debug Pascal programs at a source code level.

The full Pascal language is supported including such worthy additions as structured constants, flexible string handling and absolute variables.

HighSpeed Pascal comes complete with all the necessary files for working with the Amiga's operating system, a host of examples and 2 professional, wire-bound manuals.

HiSoft Devpac 3 and HighSpeed Pascal are just two of the products that we supply for your Amiga. Other titles include: ProFlight, HiSoft BASIC, Extend, SAS/Lattice C 5 and HiSoft C. For more details contact us at - HiSoft, The Old School, Greenfield, Bedford MK45 5DE UK.

Tel: (0525) 718181, Fax: (0525) 713716.

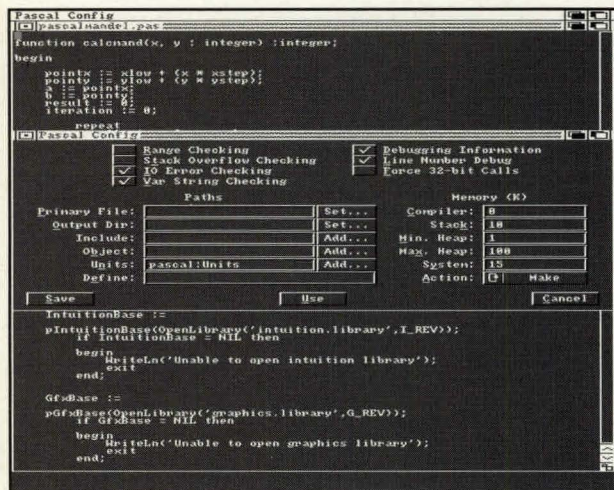
HiSoft
High Quality Software

Ever had
communication
problems at
programming
time? Andy
Eskelson
reveals a simpler
language **for your**
Amiga.

The Amiga has been in production for quite a few years now, and there are many languages that are available for it. In fact there are several versions of some languages, the exception to this is Pascal. There have been one or two attempts but Hispeed Pascal is one of the very rare commercial releases of the language. Pascal was first published by Niklaus Wirth in 1971 and was slightly modified and republished in 1975. Pascal is a language that is fairly easy to learn, and has a lot of BASIC like statements in it, and if you are reasonably familiar with BASIC you should be able to understand the general idea of a Pascal program even if you have never used the language before. Hispeed Pascal is supplied with two manuals, and three disks. There is one common disk for the utilities and two program disks, one for Workbench 1.3 and another for Workbench 2. The manuals consist of a user manual and a technical

reference. I was pleased to see the manuals in this format, as there is nothing quite so annoying as to keep flipping from one section of a manual to another when you are developing programs. The manuals are very well produced and for once the reference manual is a nice simple alphabetical book that makes it very easy to find the command that you are interested in. Hispeed Pascal is a complete programming environment, that is you can edit, compile and run programs from a main window. In this case it is the editor that performs this function. It is essentially the same editor as HiSoft Devpac 3 and it is quite good enough for the job. It is still possible to use other editors if you wish, but you will lose some of the integration that the HiSoft editor provides. I like the editor, and even though I prefer CygnusEd for most programming applications I would have to think long and hard before I dumped the HiSoft editor in favour of

Generates Full Mandebrot Set
 Amiga C for Beginners */
 bacus *//* mandel3.c */
 Eskelson, 2-1-9
 /* Generates Fu
 Mandebrot Set
 Bits From Amig
 Beginners */
 // */



Cygnus. I did not even bother to read the editor section of the manual, I just dived straight in and got on with the programming, that's how easy the editor is to use. Debugging is another important area, and once again HiSoft have drawn upon other products to provide the correct tool for the job MonAm is very similar to the program of the same name that is supplied with Devpac and is every bit as good. There are limits, but these are user defined by setting compiler options up. To use the debugger it needs the full debug information, so during development it is normal to instruct the compiler to include this information, and only when the program is fully debugged would you compile it without this debug information in order to reduce the size of the program. MonAm is a full symbolic

debugger, that you can set up to single step through your program, it will disassemble the memory load and save chunks of memory, and if the debug info is included it will show you the source line of the program that is being executed. MonAm is just about the best debugger available for the Amiga, so full marks to HiSoft for using it. There are many many commands and features _available to the user when using the MonAm here are just a few of them..

Multi-Windows, Register, Memory, Disassemble and Source. Goto Address Goto Source line Print window Set breakpoint Single step Search memory

and many more...

In fact the debugger really needs a full review in its own

right but as this is supposed to be a review of Hispeed Pascal I will stop describing the debugger at this point. Installation of Hispeed Pascal is very simple. Use the disks as supplied if you do not have a Hard disk, or if you do create

It is such a
 simple
 language...
 anyone who
 makes a
 mess of a
 pascal
 compiler
 should be
 shot

a directory and drag the icons from the supplied disks into your new directory. That is about as simple as you can get. Once you have the programs onto your hard disk, you have to tell the editor and compiler where to find the files. It was at this point that I found just about the only real

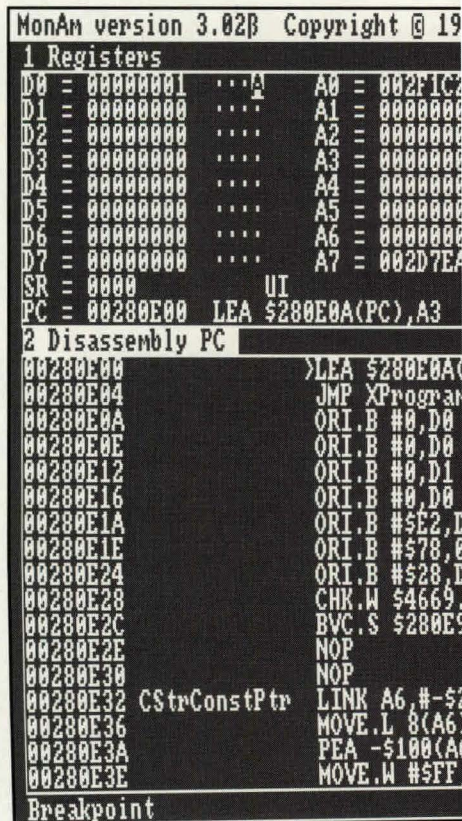
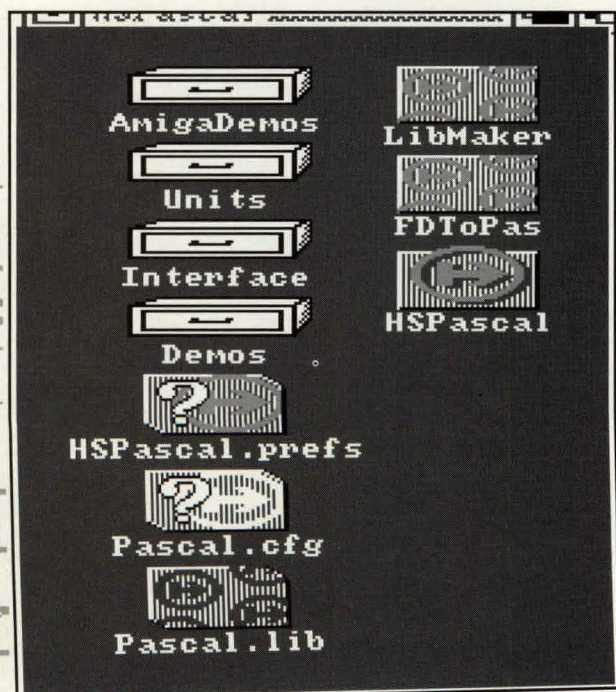
annoyance of the program itself. The path requesters are woefully lacking in length. I was unable to set them up directly, e.g. my full path to the Hispeed Pascal directory is...

Primary:
 Development /
 Pascal / HSpascal

As the requester only allows 32 characters this would not fit. It is _simple to overcome; I just entered an assign in my startup sequence thus :

Assign Pascal:
 Primary:Development/Pascal/
 HSpascal and then used the assignment pascal: in the requesters. The point is that this should not have been necessary, and rather spoiled the nice simple installation procedure. Once installed you simply click on the HSPascal icon and you are into the editor environment. Hispeed Pascal has a high level of Turbo Pascal compatibility according to the manual, and I am in no position to doubt that judging

by the odd looking units supplied with Hispeed Pascal. That is another oddity, Hispeed Pascal can use units, which are precompiled routines that you can incorporate into other programs without recompiling them. When I saw the format of them I said... Ahhh Modula 2! They are VERY similar to a modula 2 module. (Modula 2 is another creation of Wirth's) I was therefore quite happy with the concept, but it might take other users a little time to come to grips with. As a Pascal interpretation Hispeed Pascal is very good indeed, and I had no bother at all in compiling and running standard Pascal programs, that is programs that are not machine dependent, and only use the built in Pascal functions. The operation was extremely fast so fast that it was almost like working in an interpreted basic environment.



/*
 mandel
 3.c */
 /* */
 A.
 Eskelso
 n, 2-1-
 90 */
 /* */
 mandel3.c */
 /* */

t * // * * // * Bits From *
 by
 * // * * A.
 * // * * *
 // * * // *
 C for
 by Abacus
 Eskelson,

As I have said Pascal is a SIMPLE language and because of that anyone who makes a mess of a Pascal compiler should be shot. Thankfully HiSoft have made a very good job of the compiler. There are a few options to the compiler, mainly to do with the debugging information and the run time checking of the programs. There is a very nice graphic unit supplied with Hispeed Pascal and that will do many fancy options, and is much the same as provided with Turbo Pascal. However the real test is not how well Hispeed Pascal stacks up against Turbo Pascal, but how well it stacks up against the Amiga, and other Amiga development environments such as C. The Amiga is a very powerful computer into which a lot of effort has been put into developing system resources such as Intuition, Exec and all the other system

libraries. It is very easy to use these libraries from C or even assembler, but Hispeed Pascal has some problems. Let me say this now, HiSoft have done a good job on getting Hispeed Pascal to work with the Amiga Libraries, but it is rather the way in which Pascal itself works that makes life awkward. In order to see how easy it was to program the Amiga using Hispeed Pascal I decided to convert my old mandelbrot test program that was written in C, into Hispeed Pascal. This program is very crude, and uses none of the fancy time saving methods that later plotting routines use. The plot area is also quite small by default, in order to keep the plotting time fairly short. One of the biggest problems is that Pascal does not have the Structure system that C has, Pascal uses a similar thing called a Record, this in itself is no great problem but it causes knock on effects which have to be programmed out, such as converting a pascal string into a C like string that could be inserted into the

record. (as the window title) I have followed the original C

I did not
even need to
use the
editor
section of
the manual, I
just dived in
and got on
with it.

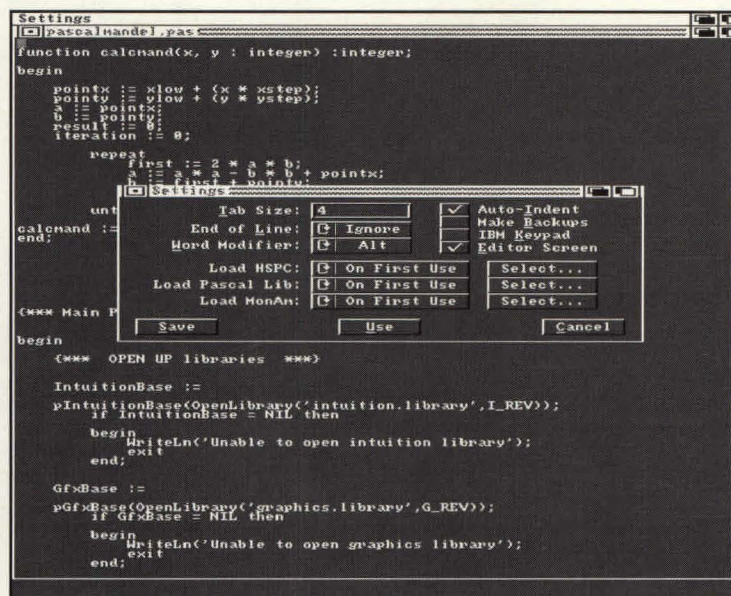
program very carefully and apart from hard coding the number of iterations into the Hispeed Pascal program all the same Amiga libraries are called, and called in the same way. The two programs should have given similar results, but surprisingly the C version is nearly twice as fast as the Hispeed Pascal program.

Bearing in mind that the loops are very tight I was surprised by this. The Pascal program uses 16 iterations of the mandelbrot calculation and takes 25.73 seconds to complete the default window. The C program takes 14 seconds. It is possible to increase the number of iterations to 48 on the C program before the run time of the C program is the same as the Hispeed Pascal program. Hispeed Pascal has an in line assembler which can be used to hard code parts of your program, and such a composite system is very often a very effective way to do things. The interface to the Amiga libraries is also made a little clumsy in that some of the routine names have been changed in order to indicate if they are records or pointers. e.g. NewScreen refers to the Intuition NewScreen structure, even more annoying is that in some cases Pascal needs to reference a dummy variable in order to make a command work as shown in the listing, as in this line in the listing:
dummy :=

WritePixel(MyWindow^.RPort, x,y);

Compare the C listings and Pascal listings side by side, I think that the C program is much more suited to Amiga development, which is not surprising as most of the Amigas OS is written in C. There are quite a few examples supplied with Hispeed Pascal and they serve to illustrate various aspect of the system, if it were not for these examples I would have had a devil of a time getting this simple mandelbrot program to work. Generally using Hispeed Pascal as a pascal is easy, and will no doubt find a lot of people who will enjoy programming in it, especially with such a high quality package as this one. However the reservation is that if you are programming an Amiga application you would be much better off using C, which you will have to understand anyway in order to use the Amiga system libraries.

Highspeed Pascal was tested on an Amiga with the following configuration:
A2000 A2091 Hard Disk controller 40 MB Quantum 80 MB Seagate 2630 accelerator with 4 MB of 32 bit Ram A total Memory of 9 MB



/* mandel3.c */
 /* A. Eskelson,
 2-1-90 */
 Generates Full
 Mandebrot Set
 /* Bits From
 Amiga C for

Check out next months coverdisk which will feature Pascal programmes in full!

/* A. Eskelson, 2-
 Generates Full Mandebrot

education

Playing familiar games on the computer makes a pleasant change from having to study the user's manual first. The manuals accompanying these two games are well worth reading, however, as apart from explaining the game in detail, they provide an interesting catalogue of data explaining probabilities and increasing the chances of scoring well. In fact, the dedicated player could well become a real expert before long. While they are pure entertainment, they are also to some extent educational.

CRIBBAGE KING THE SOFTWARE TOOLWORKS

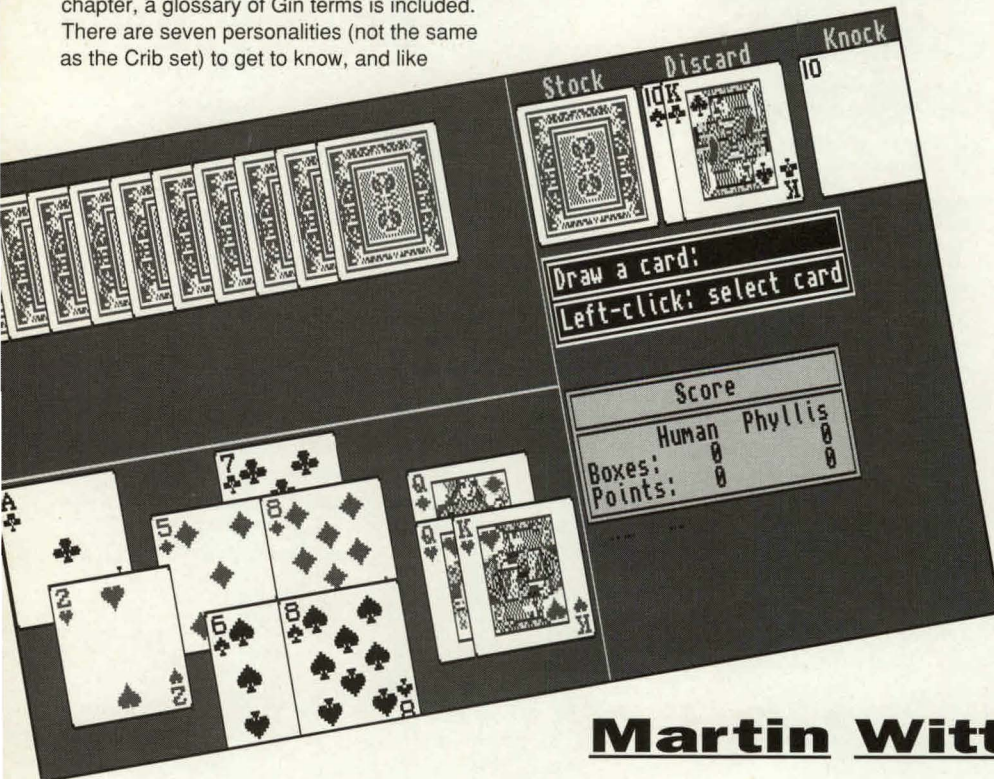
Much of the success of good Cribbage Players comes from their ability to analyse and anticipate the play of their opponent. This is why Cribbage King gives you seven different computer personalities to play against or get advice from. The manual gives descriptions of the personalities and an explanation of their advice. You can play two-handed Crib against one computer player or four-handed Crib against three computer players. It is best to get to know them one at

a time before taking three of them on though! There is also a mode for five handed crib. Included in the package is a small pack of cards and a Crib board and pegs. A duplicate Crib mode is available so that after playing a game, another human or computer player can replay the game with the same cards being dealt. The program will keep a permanent record of your win and loss records against the computer players.

GIN KING THE SOFTWARE TOOLWORKS

Gin King is the computer version of Gin Rummy and is run on the same lines as Cribbage King. In addition to the 'Rules of Gin' chapter, a glossary of Gin terms is included. There are seven personalities (not the same as the Crib set) to get to know, and like

the Cribbage manual, a history of the game is included. Decision : 80% Comprehensive and ideal for both beginners and experts.



KIDS TYPE GENISOFT LTD.

Kids Type is a word processor for 4-8 yr olds to enable them to make up stories, play the spelling game and listen to the computer play back their stories. The program is designed to cultivate the imagination through the use of large characters, bright colours and easy to use controls. The great advantage of providing children with a word processing program is that they get to realise that the computer can be used for their own creativity, not just as a games machine. This program offers this in an appealing way, with just the right amount of support, for example in the use of graphics to illustrate what the child has written. Having typed some text, the child is invited to click on one of the small pictures at the top of the screen, which will then become attached to the mouse pointer.

Positioning the pointer anywhere in the typing area and clicking again will secure the graphics. There are eight coloured gadgets to play with and R G and B (red, green and blue) action boxes which alter the red, blue and green components of the colour chosen. The colour selections can be saved, as can the 'whole story' and printed out. There is a choice of voice to accompany the speech menu - choose from 'woman', 'man', 'robot' or 'accompany' which toggles between recite and pronounce modes. The Spelling game is a standard 'See and Spell' format. Verdict: Well worth investing in if you have young children, to get them used to being active participants, not just passive games players.

Martin Witton

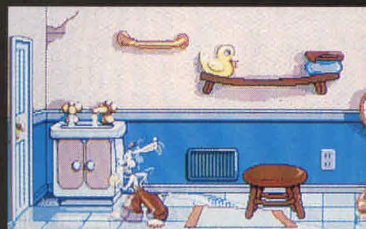
examines some of the fun educational programs that make learning on the Amiga enjoyable for all age groups.

HARE RAISING HAVOC DISNEY SOFTWARE £25.99

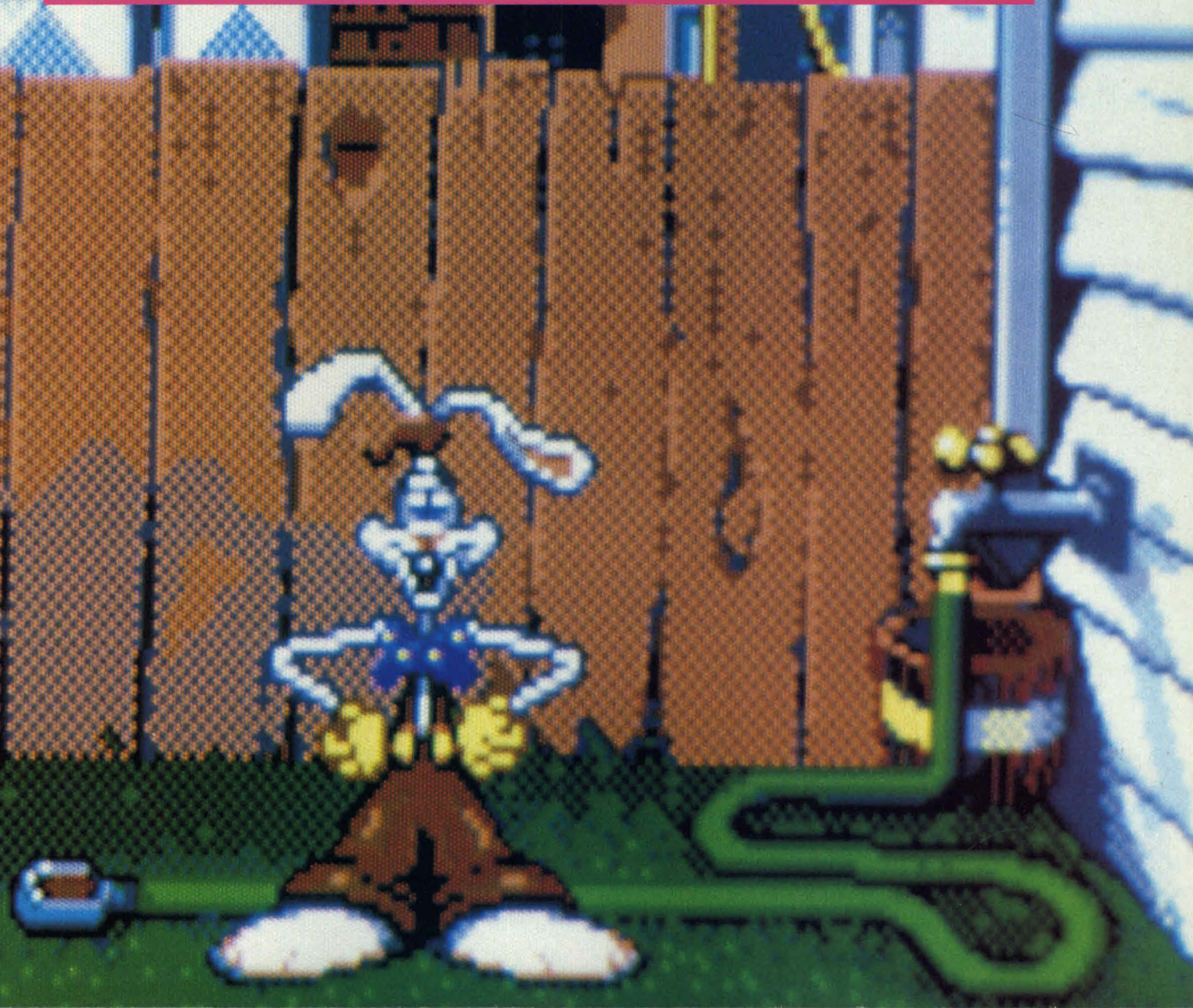
Using familiar Disney characters, Hare Raising Havoc (in no less than 6 disks) brings the magic of cartoons to the Amiga. (Magic if you happen to like cartoons that is!) Roger Rabbit is in trouble. He is supposed to be caring for Baby Herman (remember him cigar smoking in the movie?) but the infant gives Roger the slip and heads for the Tasty Moo Dairy. The young player has to help Roger out of his seemingly inescapable

predicaments, to find Baby Herman before his mother returns.

The Amiga is wonderful for graphics and this program makes full use of its potential in a series of excellent cartoons. The use of the joystick enables the player to get Roger to kick, slide, and jump on objects to see if they will help him escape. It's a race against time. The manual includes a Toon Town Times newsletter which features the story line around the Havoc



program. Printed on what must be recycled paper (brand new paper can't be that rough) the manual is short and to the point. Verdict: If you are a Disney fan you'll enjoy this game.



SPELLBOUND

LANDER SOFTWARE - £ 25.99

Spellbound claims to: "provide hours of fun and amusement for all users while helping to develop and improve logic, memory, spelling, spatial awareness, judgement, tenacity and co-ordination skills". Clearly these are all skills I need to develop as the first attempt at this program brought me to the realisation that I had failed miserably - over enthusiastic use of the joystick moved the helicopter onto the rocks where it was unable to escape. Sadly I had to sit and wait until we ran out of fuel and could start another game! However had I succeeded, I would have discovered that Henrietta (see Henrietta's book of Spells) has enlisted the help of Hal her American cousin to remove that most wicked of witches, Morgana the Morbid's wand, which was locked under 5 locks and 5 keys, by that twisted genius - Professor

Grime.
(Morgana the Morbid? What a great name! Sounds like someone I used to know very well!) . Opening the locks by winning the keys is achieved by collecting letters and words whilst defending yourself against all kinds of cleverly disguised robots. There are the usual levels of play, as well as lots of choices to be made, from levels of fuel, deadly or safe walls and number of lives. The instruction manual tells you that a younger

child may need the game to be set up by an

adult but "You will be amazed how little involvement will be required. In no time at all a child's skill usually exceeds that of the average parent - You have been warned".

Well I was and it's true - my small son aged 8 didn't get his helicopter stuck he soon worked out how to play the game, although getting the letters in the right order proved more difficult!

The children loved it. Verdict: Imaginative and attention holding - one of the better games we have tested for spelling.

**COUNT AND ADD**

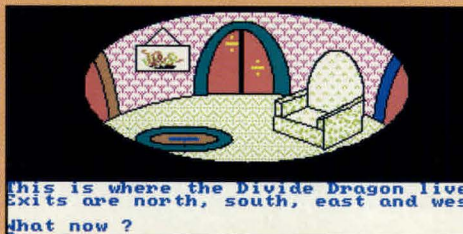
LANDER EDUCATIONAL SOFTWARE £25.99

Another program from the Lander stable, this one is designed for 4 - 7 year olds, just getting to grips with early maths. The games are structured in such a way as to help with counting and adding and is also a program which would be suitable for children with learning disabilities. They don't take many chances with the parent's and teacher's ability either, the instructions are set out at great length - you are half way through the manual before you get to the loading instructions and at every stage the computer has on-screen instructions. In addition 'Help' is available if required! The program is designed to be used in conjunction with the National Curriculum Key stages 1 and 2. There are five games on the program and a simple little character called Shades (who talks) takes the part of the teacher. Results can be printed out so that progress can be monitored by both the teacher and the child. Children seem to quite enjoy 'doing' sets and the first two games utilise this interest by providing objects on the screen such as apples and the child has to press the correct number. The counting game is offered in the form of animals and a train is the subject for simple counting and addition. The last game offers six incomplete addition problems, each showing randomly selected objects. The user has to replace each set of objects by the appropriate number and then work out the total. This game, called Spider is run against the clock, but the times allowed can be set by the teacher. For all the programs, once all the questions set have been answered, an animated reward/ results screen appears and the game is over. Verdict: More of a classroom activity program, but OK to use at home. No attempt is made to disguise this as a Game, but this does not mean that children will not be absorbed by it. There is even a badge in the box!

MATHS DRAGONS

COOMBE VALLEY SOFTWARE £ 14.99

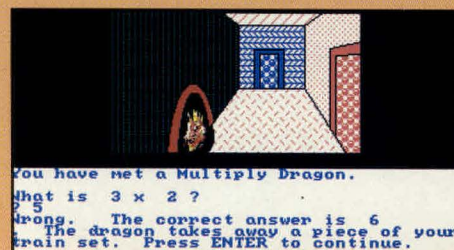
Maths Dragons is a game for primary school children from 6 - 12 years to learn and practise their arithmetic. The game starts with an explanation of the program, telling the child that in the playroom the baby maths dragons have hidden the train set. The dragons, we are told, are friendly but ask the player to



solve sums before they will let him or her pass. You need to find eight pieces of track, the engine, three carriages, the station, signal box and the key to wind up the train. A child would probably need the help of an adult to understand the instructions on the screen, unless he or she is a competent reader.

There is a 'cheat option' which is activated by typing the word HELP! You can choose the type of sums which the dragons will ask and the maximum size of the numbers involved. The minimum allowed is 10. If the maximum is 144 or less, the dragons will only ask multiply or divide questions using tables 2 to 12. If the maximum is higher than 144 then larger tables may be used. We entered 144 as the maximum to see what would happen! The screen starts with an empty box under the table. After we

decided which direction to go in, the screen showed us a room with doors and the picture of a carriage. At this point we had to consult the manual to discover what to do next. We had to type either TAKE or GET and the object's name. The object is then described in more detail - such as 'the track is what the train runs on!' We were then confronted with our first maths problem. We got it right, so were offered more directional questions. The manual does contain a map to show the location of rooms. As the program is designed for children who are just learning to add up to those wishing to practise tables, the game is quite complicated to master. Presenting arithmetic problems in an adventure game format, however, is a fun way to learn and should keep children interested. There are different levels of play and the instructions tell us that at the hardest levels, mums and dads may find themselves tested. (Now that should appeal to youngsters!). Potential buyers may find the title misleading as the term 'Maths' is unfamiliar to many younger children. Conversely, one 11 year old girl tester told me that the Dragons part of the title would imply the game was for very young children. And 6 - 12 year olds may well find looking for trains is definitely 'infra dig'! Verdict: An interesting variation improving maths skills, but the subject matter may be pitched at the wrong age group.



Getting into Programming

Last month we introduced some of the different computer languages which are used to tell the Amiga what to do, now we turn the spotlight on BASIC for a more detailed appraisal. It is simply not possible to teach programming in a single article, so rather than attempting the impossible, we'll stick to just the basics. With that utterly intentional pun out of the way, let us now proceed.

BASIC really grew up in the heady days of the 1960s when everyone was into peace, LSD, and flower power. Being too young to remember a great deal about these times, I can only look at BASIC to gain some small inkling about the rebellious period in question. BASIC in its native form is incredibly undisciplined, being designed with the people writing the programs in mind, as opposed to the computers suffering the consequences. There is a balance for a computer language between being reasonably close to the English spoken by the programmer, and the binary 1s and 0s that the machine uses. BASIC is at one extreme and Assembler the other - easy on the human but tough on the Amiga, or, in the case of the latter, vice versa.

I distinguished between compiled and interpreted languages in last month's issue, but if you missed it

(shame on you!), here's the lowdown again as it is quite important to understand the difference.

BASIC is fundamentally an interpreted language which means that to execute the program, the computer has to translate every instruction it comes across from English into machine code before it is acted upon. This works well enough, but is depressingly slow as it is such an inefficient way of getting things done. Much better for the computer is to perform the translation all at once before the program is run and this avoids repetition, a process called compilation. While BASIC is essentially designed to be interpreted, you can buy compilers such as HiSoft's which give you a meaty speed increase as well as certain other advantages.

What's it all about?

All programming languages have certain fundamental principles in common, and once you take on board the concept that all a program does is move numbers around the computer's insides, things start to get much clearer. They do? Yes, take changing the colour of the screen as a simple example. When you issue a "COLOR" statement to AmigaBASIC, all it does is alter a number in memory; the hardware notices this and hey presto! The colour of the screen is changed. Absolutely everything on every computer under the Sun (sic) works on this simple idea, but what does this have to do with BASIC?

BASIC is a high level language which means that its structure is further away from the computer's understanding

**Basically,
It's Pretty
Simple.**

of things than it would like, so your Amiga has this tiresome translation phase to decide which numbers to put where. This is a very tedious thing for a human to do (it's called writing machine code, and you find this is often the only way to get the best performance from your computer), and so you don't have to think in terms of how numbers move around, or even where they get to, just the end result.

A real world analogy may be

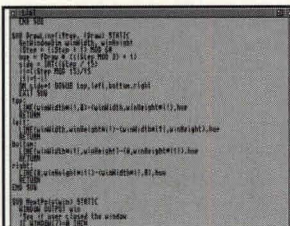
when you get on an aircraft, you just get off again at your destination without knowing a great deal about how you got there. The pilot, we hope, knows how the plane arrived without necessarily knowing the intricate details of the engine's inner workings. All this is analogous to programming for you don't need to understand the subtleties of the hardware in order to get the computer to draw something, although the

more knowledge you have, the more you will get out of the machine. Programming is easy - it's logical and therefore amenable to a bit of effort for real progress.

Language definition

One of the biggest problems with BASIC is that there are so many different forms in →

**In the second part of
the AUI series on
programming languages
Mike Nelson kicks off
with a look at one of
the most widely used
languages around.**



Part II

the Jargon

ACRONYM: A

Completely Ridiculous
Officially Nurtured Yankee
Method of generating
confusion and mayhem

ARRAY: 'ip 'ip Array! This is a convenient means of storing lists of data with similar characteristics. For instance in an address book program you would store all the names in one array, and the numbers in another etc. It's actually a bit of an old fashioned method these days, but it works, just.

ASCII: Standard way of representing text characters in computers. About the only standard that is standard.

BASIC: Beginners All Purpose Instruction Code - one of the computer world's favourite acronyms.

BINARY: Base 2 - the number system used by computers. Just 1 or 0 is the order of the day in accordance with the electronic states of on or off. We use denary, or base 10 as we have on, off and eight fingers. I suppose it was too cold in the stone age and tootsies were covered up or we may think in base 20.

BIT: Binary Digit. Either a 1 or 0 in the simple world of the computer.

BUG: An error in a program. Stems from the days when computers were built from valves and a little creepy crawly getting into the works used to mess things up.

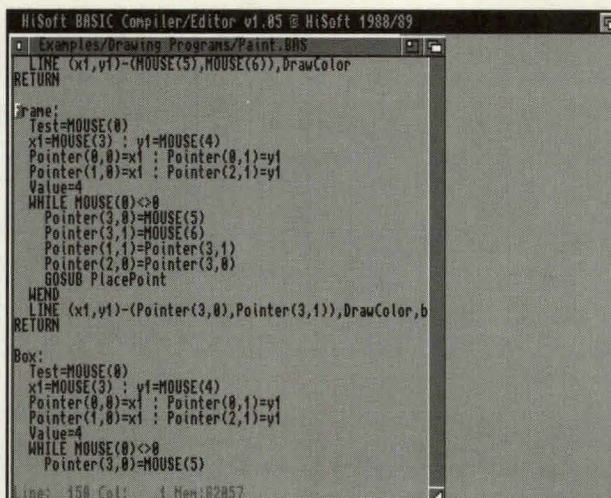
BYTE: A collection of 8 bits, and a convenient way of representing numbers to a computer.

CODE: An indeterminate way of describing a chunk of program.

CRASH: When a program crashes, it usually sends the Amiga to Oblivion City without a return ticket. Characterised by a flashing LED, red box, Guru Meditation number, and really annoyed user.

DEBUG: The noble art of getting rid of programming errors. Often this is more tricky than writing the program itself.

EXECUTE: This is what happens when a computer gets hold of a program, or the editor gets hold of the editorial assistant...



existence. For the most part, they are all independent of each other too, and this is a real downer as it means that a BASIC program written on one computer, or even one version of the language, will give up and die on another. The other problem is that programmers get irritated by the often subtle differences between BASIC dialects, so this is perhaps not the greatest language for writing portable "cross platform" code.

Those are the not inconsiderable minus points about BASIC, but it does have many redeeming features, especially in its more recent incarnations. It will never really be a professionals' language, but for a beginner it is an excellent way of getting into the swing of things. Firstly, as I've tried to stress, most of the usual hassles about dealing with computers are taken care of by the interpreter. For a start, programs do not crash the machine when they run into trouble - they will exit gracefully, giving the user a reasonable explanation about what has upset the computer, for instance "Subscript out of range" or "Syntax Error" when you make a spelling mistake. Admittedly, a compiler or Assembler will pick up a lot of misdemeanors but most go unnoticed until a really unhelpful Guru ruins your day.

Another nice feature about BASIC is that the programmer does not have to be too concerned about the types of data being employed as the interpreter makes reasonable assumptions, and rounds off decimals when necessary. With a language like C or Pascal, one has to be very strict about using integers or floating point variables (for instance when comparing two different numbers they ought to be in the same format), but

BASIC tends to be a lot more gung ho about the whole data typing affair. This is a double edged sword, as while easier on the programmer, it does not really foster good programming practices, although modern implementations like AmigaBASIC do offer some limited, and optional, ways of setting up integers etc. I would recommend using them as it prepares you for the more advanced languages, if nothing else and may ease your guilty conscience.

Structure of a BASIC program

BASIC programs are relatively easy to follow, provided a few simple rules are adhered to and the code is split into three broad sections. Like most programming languages, the best way to start is by defining all your variables, with suitable comments so that in six months time you will be reminded what each of them does, because unless you have a brain the size of a planet, you will forget. Once the introductory stuff is out of the way, the next chunk of code is the workhorse.

Unless it is a very simple program, with only one purpose in mind and no real flexibility to account for different conditions, you will next have a main program loop. For example, say you wanted to write a program to calculate how many rolls of wallpaper you will need to do a reasonable job of the lounge. You would have to tell the computer about the room's dimensions and the width of a roll before it could do the necessary sums. This is very simple to program as it is just a matter of setting a load of

Although there is
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for you

variables to the correct dimensions and printing out the results of the calculations. You don't exactly need a spreadsheet running on a Cray one to work that out, but say you wanted to make the program more flexible, perhaps taking into consideration doors or alcoves. Your main section would start to get very long indeed, and this gets difficult to manage or debug.

Subroutines and the dreaded GOTO

This is where subroutines come in. You can consider

programming to effectively be about solving a problem, and in real life, the best way to do this is the break the problem down into manageable portions. If you were building a house from nothing, there is a reasonably well defined way of going about it - start with the foundations, then do the external walls, roof, put in windows, etc. Programming of any kind, no matter how complex, is exactly like this. Take, for instance, writing a game like Pacman, which I have chosen as everyone knows the rules. Where on earth do you start? The screen and maze is a good place, and then do the Pacman movement within its constraints. Add in the various checks for dots or power pills before the attention is turned to ghosts' motion and the various factors which dictate how they will behave.

The next point is the scoring system, high score table, sounds etc. This apparently complicated example suddenly seems more manageable, but I wouldn't recommend you trying it out as your first program, however!

Each different chunk of the program is usually written in a separate subroutine, called using the GOSUB command. In AmigaBASIC, you identify the subroutines by proper

Compiling It!

- Does the compiler in question work with the source code from your original BASIC? It is not really on to completely re-write a program just to compile it!
- Will the compiled program run without the compiler and its various libraries? If not, you will not be able to distribute your masterpiece.
- It is rare these days for a compiler manufacturer to retain copyright over the compiled program, but check first. Most will be happy with a little mention somewhere.
- AMOS and Blitz Basic are two packages that are slanted towards writing BASIC arcade games, and they are the best bets for doing animation or any other kind of moving graphics.
- Check that the compiler will not limit you by only doing integer calculations which, although much faster, may have inadequate precision for your needs.
- How well does the compiler and its resulting code interact with the Amiga's multi-tasking environment and also does it support the new operating system, faster processors and updated graphics chips?
- Can you link in other languages like C or Assembler routines easily and can you access internal variables? This may be necessary for a bit of extra speed where it matters.

GOTO's are the scourge of programming purists as they are so unpredictable and make the program difficult to follow. They don't really make a vast difference to the computer, but if your program sequence jumps all over the place, then debugging is made that much harder. Use the GOTO only very sparingly as it is really frowned upon in most circles, the preferred method of moving around being subroutines.

Program control

BASIC has a fairly limited, but largely adequate, means of controlling a program's sequence of events. This is all about responding to different conditions within the program and the IF...THEN...ELSE... construction is the mainstay of checking what is going on. Recent versions of the language are more flexible than they used to be and some quite sophisticated commands, such as those in found C, are now possible.

Controlling loops

Computers really come into their own when it comes to doing repetitive tasks over and over again. The concept of program loops is an important one but there must be some way of breaking out when it is time to call the exit routines (see later). BASIC has borrowed some useful constructions from the likes of C and Pascal to add to the

rather limited classical FOR...NEXT statements. WHILE...WEND is often a more sophisticated means of generating a loop, particularly when the number of iterations around the loop is unknown. An example of both in our Pacman game would be the loop which moves each ghost in turn, and the main

program loop. Perhaps you can see the difference is that we know there are four ghosts so a FOR...NEXT loop is the order of the day. However, we don't know how long the game will last so the main chunk of code would be better served by the other mechanism.

Arrays and File Handling

BASIC has quite powerful array handling facilities which are very useful indeed.

You can continue to learn in this friendly

environment before you branch out on

one of the more adventurous courses.

provided you treat them with a bit of respect and don't try any fancy tricks. You have to decide how many items the array will hold at a maximum and stick to it as redimensioning is not allowed. Newer languages have more sophisticated mechanisms, and the trendiest approach is called object orientated programming, but that is beyond the capabilities of AmigaBASIC.

Interacting with data files on floppies or a hard drive is pretty straightforward with AmigaBASIC as all you need to master is a couple of commands which are remarkably similar to the usual screen I/O routines, PRINT and INPUT.

Graphics and Sound

The Amiga is one of the finest all round computers available and I don't need to tell you all about its wonderful graphics or sound hardware. How do you get to use them from BASIC? The answer is, unfortunately, disappointing, in that AmigaBASIC is so desperately slow that anything worthwhile must be compiled.

especially when it comes to moving characters around. This is a real pity as the commands to control sprites are really impressive - they just don't work quickly enough!

The story on sound is more encouraging, however, and although there is no direct support for reading IFF samples, the various AmigaBASIC commands can do a reasonable job for you.

Ending It All

The last section of the program is BASIC suicide and this is normally easy enough to achieve by an END command, but you should do a number of things before this happens. It is good practice to only have one END statement in a program so that you can be sure about cleaning everything up neatly. For example, you may like to offer the user a chance to save their work before Armageddon sets

in. Certain "housekeeping" jobs like closing data files which you may have opened are obligatory and again this kind of decent behaviour will stand you in good stead when you move up in the world.


What is BASIC useful for?

Virtually every programmer learns the trade by starting off with this language for the reasons outlined above. With everything there is a balancing act between ease of use for the programmer and execution speed from the computer's point of view. AmigaBASIC is,

in my opinion, very highly specified, but much too slow to be of practical use but the addition of a compiler like Hisoft's makes life a lot more tolerable. Why this situation arose is a mystery as the Amiga is a fast computer, and it is perhaps a sign of the times that AmigaBASIC is so low on Commodore's priority list - they simply don't feel there is enough demand to do anything about it. HiSoft's sales may shoot that one down in flames, however.

BASIC will get you by in most circumstances, even if it's just a matter of working out the logic of a program before re-coding it in a more suitable form. You can have a good go at database types of program and have a bit of fun with graphics, as long as you don't want to do any heavy duty animation or 3D-rendering! It's easy to get frustrated with AmigaBASIC as it is so slow, but the addition of a compiler like Hisoft's will cure a lot of the problems, and you can continue to learn in this friendly environment before you branch out on one of the more adventurous courses we will describe over the next few issues.

There is a pile of AmigaBASIC software in the public domain and a quick look through the pages of AUI should put you on the right track to see what's possible. I'm a firm believer in learning from other people's code, preferably without actually nicking it, but subtle modifications here and there can teach you a lot about what is going on. This also goes for the other languages as well, particularly C and Assembler.

Next month we will continue with C, the Amiga's native language and one which is used extensively throughout the real world so it makes sense to move from BASIC into this domain. 

HiSoft BASIC Compiler Options

| | | | | | |
|-----------------|-----|----|--------------------------|------|----|
| Overflow checks | Yes | No | Break checks | Yes | No |
| Array checks | Yes | No | Symbolic debug | Yes | No |
| Line numbers | Yes | No | Error messages | Yes | No |
| Event checks | Yes | No | Shared library | Yes | No |
| Variable checks | Yes | No | | | |
| Stack checks | Yes | No | Workspace (Kbytes): | 128 | |
| Underlines | Yes | No | Max labels (see manual): | 2000 | |

Compile to **Memory** **Disk**

Cancel **Compile**

```

00:
Test=MOUSE(0)
x1=MOUSE(3) : y1=MOUSE(4)
Pointer(0,0)=x1 : Pointer(0,1)=y1
Pointer(1,0)=x1 : Pointer(2,1)=y1
Value=4
WHILE MOUSE(0)<>0
  Pointer(3,0)=MOUSE(5)

```

line: 150 Col: 1 Mem:82857

the Jargon

GURU: A strange being that lives inside the Amiga looking out for dodgy program code and zapping it into oblivion.

HEXADECIMAL: This is base 16, another way of doing things mathematical on computers. It's easier on the processor but we need 16 digits to represent it, hence 0-9 and A-F.

INTEGER: A whole number - i.e. no decimal places.

I/O: input/output - the fundamental thing a computer does when a human is around. There are various forms but the keyboard and monitor are the obvious ones, unless you believe in telepathy.

FLOATING POINT:
Opposite of Integer!

PROCESSOR: The chip analogous to the brain - only a squillion times less powerful...at present.

PROGRAM: A sequence of instructions which tells the computer what to do.

PROGRAMMER: Often weird type of person who writes code. Great fun in the pub, eh Caroline?

PROGRAMMING: The mystical art form of generating programs. Usually involves long hours of sweating over a keyboard, and buckets of coffee (some of which invariably end up within the workings of the computer or disk drive).

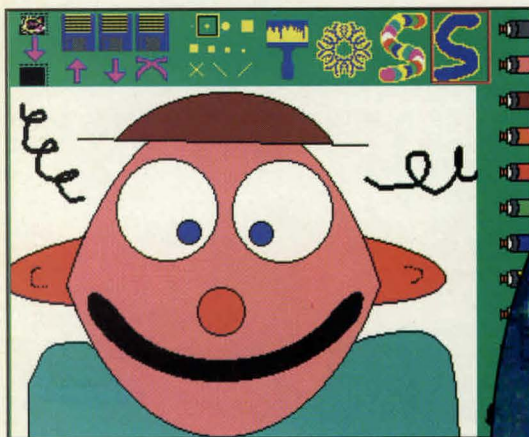
SAMPLE: A means of storing a sound in a form the computer can play back. See the March issue for full details.

SPRITES: These are user-definable shapes which move independently of the screen background. Not many machines have them these days, but the Amiga is fortunate and the best example is the mouse pointer.

STRING: Sequence of characters to make a word or sentence.

VARIABLE: A storage cell which can hold a piece of data. This may be a number, letter or string of letters.

WORD: Two bytes, or 16 bits of data.



Kids Paint

Disk 2303 Virus Free

If your kids, or yourself, are a bit baffled with Deluxe Paint then this is the next best thing. Kids Paint is a simple paint program that speaks when you select a different colour or tool. Options include save/load picture, cycle and symmetry draw. Nicely program med and great for younger children. 9/10



At The Movies II

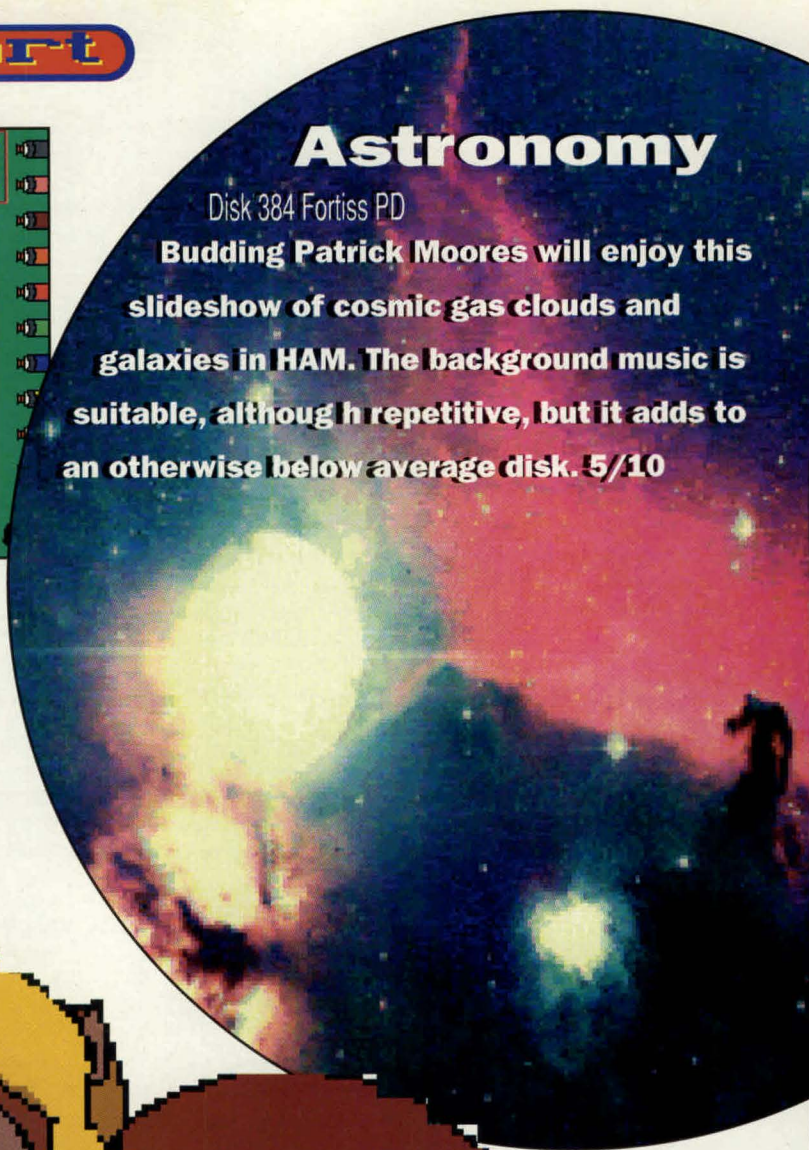
Disks 1592a-d (4 Disks) 17 Bit

Eric Schwartz is back again with the awaited sequel of his original animation, starring the very sexy Amy the Squirrel. The minimum hardware requirments to run this demo are 1 MB RAM and 2 drives. However, it's best run on an Amiga with 3.5 MB RAM and an accelorator card. It takes a few minutes to load and lasts for nearly two minutes. The animation is totally superb and impressed every hard-nut in our offices. If you can get the four disk set for under £ 5 then go for it. 8/10

Astronomy

Disk 384 Fortiss PD

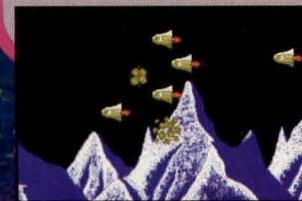
Budding Patrick Moores will enjoy this slideshow of cosmic gas clouds and galaxies in HAM. The background music is suitable, although h repetitive, but it adds to an otherwise below average disk. 5/10



Excalabur

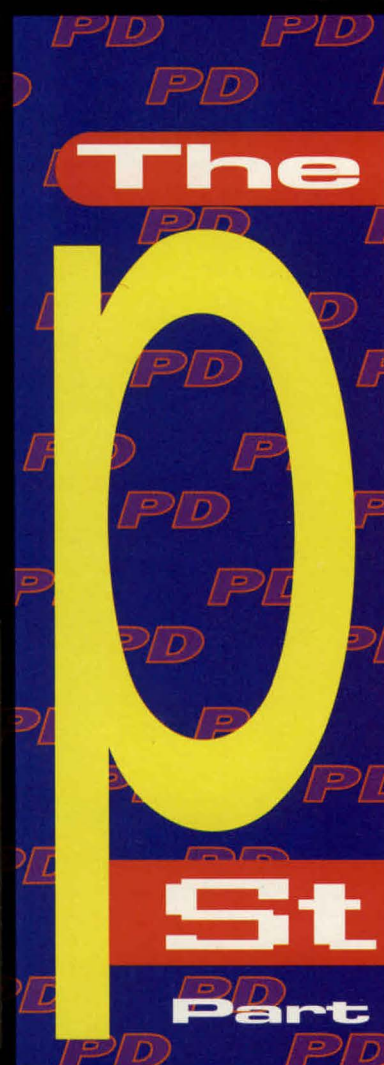
Disk 2102 Virus Free

Shoot 'em ups were never this difficult. While the graphics are pretty and the sound is good, it takes a lot of practice to get anyw here in the game. You could say it's a challenge or just not fair. 7/10



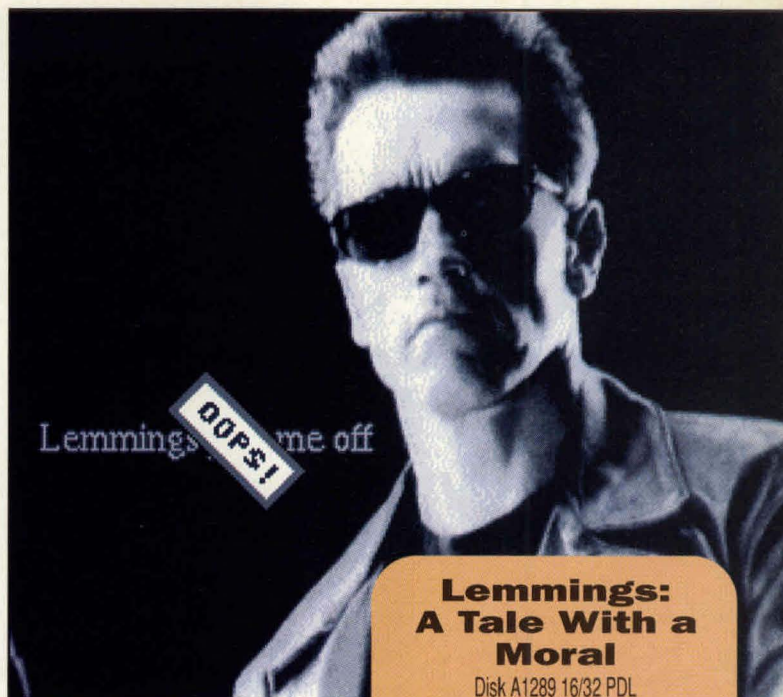
Scoring

The marks awarded to each PD disk are based purely upon their own merits and of course our personal views. Value for money and reliability are also taken into account as well as features and quality of the software.



Gary Fenton continues
this month's look into
the fascinating world
of PD software. He

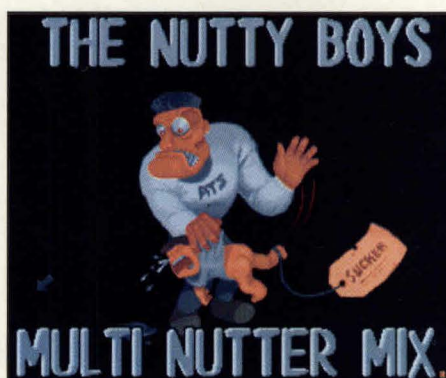
also reveals
a new software
label and talks
to John
Dudley of
Essex
Computer
Systems.



**Lemmings:
A Tale With a Moral**

Disk A1289 16/32 PDL

Another "in" thing right now is Lemmings. This disk tells an animated tale of a big Lemming and how he bullied a little Lemming. It's amusing, but lacks sound, and has a general appeal to fans of the game. 7/10



Nutter Mix

(Free with orders over #5) Virus Free

Yes, this is definitely a nutter mix. What starts off as a Jean Michelle-Jare track soon changes into a rendition of the Chicken Song. If that isn't enough to get your gran singing then the Benny Hill theme tune will. A novelty perhaps, but it deserves 7/10 just for insulting us with the Chicken Song!

Takeout

Born To Be Free

Disk 382 Fortiss PD

This is straight forward slideshow of animals in their natural habitat. The pictures have been very well digitised in HAM but the disk has no background music. 7/10

Wrestle Mania

Disk 307 Fortiss PD

American wrestling is very popular with younger children as its coverage on Sky TV suggests. This disk is a slideshow of the stars of the ring including Hulk Hogan. The pictures are pretty good but, again, it lacks background music. 7/10

the pd stakeout

Compatibility

The PD disks reviewed in this issue were tested on an A500 with Kickstart 1.3. Please check with your PD supplier that the disks you are ordering are compatible with your Amiga. Amiga Plus owners should be aware that roughly half of the software in the public domain will not work on the Plus model with Kickstart 2. Always ask first.

Digital Disco II



Digital Disco II

Disks 1666 + 1667 17 Bit

At last! A recent and decent music disk. Here are eight brilliant tunes with clear samples on two disks. The music is mostly Europop but watch out for the amazing Michael Jackson Black or White tune. There's plenty of text to read too but there are no VU meters. 8/10

Blood Sports

Disk 383 Fortiss PD

Blood Sports is an 18 certificate film and selected frames have been digitised in HAM for this dull slideshow. Unless you have seen the film and are a fan of it, buy another demo disk instead. 3/10

Proton Music

Disk Disk 1661 17 Bit

Modern Europop music covers five tracks on this relaxing disk. The music has been extremely well written and is great just to listen to. Watch out for the hot lead sax. 8/10

Sky Flyer

Disk 2240 Virus Free

Aah! Another SEUCK game! Well, this one is at least playable with neat graphics. Simply fly your bi-plane through enemy territory and blast everything in sight, while collecting the stars for bonus points. 6/10

MED 3.2

Disk 2306 Virus Free

MED is arguably the best PD music creation program on the

Public Domain Libraries

It seems that Public Domain libraries can be set up by almost anyone these days. The results are a rather long list of trading PD companies, most of which are claiming to be better than the next. This gives the buying public a tough job of deciding which library to order from and asks the question: "How safe is my order with these companies?". This is where the Public Domain Standards for Distribution (PSD), headed by John Dudley, steps in. PSD is a growing organisation that monitors member PD libraries. Any PD library can become a member, but only if it can fulfill these most reasonable conditions: 1. Libraries must have been established for at least six months. 2. All master disks must be checked regularly for viruses. 3. A telephone service must be manned during the day. 4. No pornographic material can be contained within the library. 5. All orders must be dispatched within 24 hours. John emphasizes that pornographic material is not allowed in a library that becomes a member of PSD. This is a very fair rule because young children have had access to such disks in the past and their parents have been less than impressed. Other than that, it is illegal for extreme

pornography to be distributed to anyone, even if they are older than 18 years. Public interest goes even further because PSD and all member libraries offer protection on your order, should the library with your order close down. Everything that PSD enforces can only mean good news for PD buyers. AUI has published the current list of PSD members that abide with the above rules. You should feel reassured when you order from one of these libraries, but that doesn't mean that all non-members offer a bad service. John welcomes applications from all libraries to join PSD and to offer the public that extra bit of security they rightly deserve.

PSD Members

Goldstar Computers, Blitterchips, Essex Computer Systems, Potteries, Deja Vu, Start Computers, Wilkes & Son, A Bit On The Side, Load crest, Premium Software, 16/32 PDL.

Horizon Software

People in the PD and shareware business have been noticing a lack

in support for shareware programmers. Fewer Amiga owners are taking the trouble to contribute cash to the program author. Licenceware, however, gives the author a small return for the time and effort that was put into creating a program. Licenceware is still promoted in the same way as PD, meaning handwritten labels, disk-based instructions and varying quality of the actual software. Hardware programmers and public alike need fear no longer. Horizon software has been born which will deal directly with those problems. All material that is of acceptable quality will be professionally packaged and labelled, contain printed instructions, will be supported by Horizon Software, and authors will receive commission on all sales. While Horizon have the rights to sell the software, the actual copyright will remain with the original author. Prices for Horizon software range from # 4.99 up to # 9.99 inclusive per title. This way programmers will get a return for their time and efforts, and the public will enjoy a program of a commercial standard at an affordable price. If you are interested in contributing your own programs for inclusion under the

new label (written in any language such as machine code, AMOS, BASIC, CanD o, etc), then please contact John Dudley at Horizon Software on 0268 553963. Alternatively write to: 118 Middle Crockerford, Basildon, Essex, SS16 4JA, England. You can also contact John at the same address for more information on PSD.

Contacts For PD Reviewed This Issue

16/32 PDL 35 Northcote Road
Strood Kent ME2 2DH. 0634 710788

17 Bit Software 1st Floor Offices 2/8
Market Street Wakefield West
Yorkshire WF1 1DH. 0924 366982

Deja Vu (AMOS PD) 25 Park Road
Wigan WN6 7AA. 0942 495261

Digital Access 6 Stubbing Brink
Hebden Bridge West Yorkshire HX7
6LR. 0422 844215

Fortiss PD PO Box 2 Earl Shilton
Leicester LE9 8LU. 0455 850984

Vector PD Glenavon House 39
Common Road Claygate Surrey
KT10 0HG. FAX: 0372 470358

Virus Free PD 23 Elborough Road
Moreton Swindon Wilts SN2 2LS.
0793 512321

Amiga. This version supports internal instruments as well as a host of MIDI features and SoundTracker compatibility. This is believed to be the last updated PD version before its brother, Octomed, became commercial software. 10/10

Crazy Pipes

Disk 2113 Virus Free

Now is this a Pipemania clone or what? To win at this game you must lay randomly selected pipes down on a grid so water can flow through it. If you are too slow the water will spill and you lose. It is very difficult to play and the lack of a mouse pointer makes things frustrating. 5/10

Sequencer

Utilities Disk U27 Vector PD

I was very impressed with this compilation disk, containing ProTracker 1.2a, StarTrekker 1.3, 3 module rippers, and full documentation. There was even enough room left on the disk for 3 modules. This is a superb disk for creating your own 4 or 8 channel tunes and is certainly recommended. 9/10

R.E.M.M. AMOS

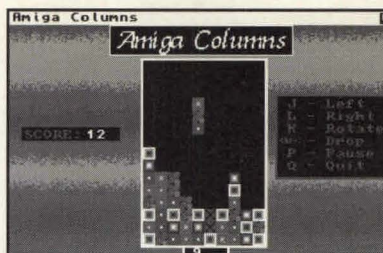
Licenceware Deja Vu

R.E.M.M. is a terrific utility for creating your own backgrounds and maps for use with AMOS. It is similar to TAME but a lot more powerful and easier to use. Robert Miller has done a good job programming R.E.M.M. and AMOS games programmers shouldn't pass this one by. 9/10

Amiga Columns

Disk 2112 Virus Free

Yippee! A game that I really



like! It's best described as a cross between Tetris and Connect 4. The gameplay is paced just right and the music is brilliant. It may not be a shoot 'em up but it's got character and lasting appeal. 10/10

Digital Access Disk Magazine

Digital Access

Disk-based magazines are all the rage at the moment and, with Multimedia coming at us fast, they may have an even greater role to play in the future. Digital Access is just one of the many disk mags and definitely one of the best. It comes on two disks and uses Workbench as its interface. Featuring utilities, games, reviews, tips, and other interesting material, it costs £ 2.50 for both disks and is released bi-monthly. 9/10



Play 'n' Rave

Exclusiveware, # 7.99, 4 Disks Virus Free

This program is for people who wished they could make non-stop music disks just like the demo crews do. Simply find a couple of Sound/NoiseTracker modules and convert them with Play 'n' Rave. Next, tell the program which tunes to load in, which disks they are on and how long each tune should play for. When you have saved your settings you can create your very own multi module music disk. Up to 90 modules can be linked together on hard disk, or floppy disk if you have the room. Clever programming on the author's part means that the next module will load as the current one plays. You can also get your demo to load a picture of your choice. A whole floppy disk can hold about 750K of non-stop music.

Play 'n' Rave's point and click interface is great to use and comes complete with on-line instructions. Other disks that come with the package include a utility disk with a copy of NoiseTracker, DiskMaster and lots of instructions. The last two disks are a demo created with Play 'n' Rave using mostly house and chart music. All in all, this package represents good value for four disks, and Play 'n' Rave is recommended to all wannabee music demo makers. 9/10



Grapevine Disk Magazine

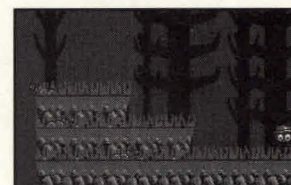
17 Bit

Grapevine is bursting with interviews, reviews, music, sick jokes, and opinions. The presentation is impressive, but while some of the humour is amusingly offensive, some is just plain offensive and it contains bad language. Still, I fell off my chair laughing sometimes. This disk will keep you glued to your screen for a couple of hours and is well worth the asking price. Get the latest version if you are interested. 9/10

Dark Things

Licenceware £ 3.00 Virus Free

A rather difficult and challenging platform game with nicely animated graphics and great sound effects. It's very playable but perhaps a little tricky for me (unless I'm useless at playing it!). 8/10



PD OR SHAREWARE?

All of the freely distributable software parades under the rather deceiving umbrella of "public domain". Quite a lot of this software is in fact

shareware. Shareware means that if you like the software, or use it regularly, the author will request a reasonable donation from £5 to

£ 20. There is usually a note on the disk informing you if the software is shareware or regular PD. Whether or not you send a donation to the author depends totally upon your level of conscience and morals. Remember, if you send a donation to the author you may receive a updated version of the software. Even if you don't receive an update you will have given the author the incentive to continue contributing into the public domain.



Crazy Sue

Disk 2172 Virus Free

This is a cute platform game where you play the part of young Crazy Sue, clutching a lollipop. The graphics are good and features responsive gameplay and a 2 player option. A bargain of a game if I have ever seen one, if a little difficult to play. 8/10

test drive

IN
FO

price
£749(rrp)
cont
act:

Hewlett
Packard
Tel: 0344
360000

Printer Driving

Before you buy any printer, always check that the correct printer driver comes with the printer. If you have any trouble in obtaining the HP Deskjet 500C printer driver, then contact WeServe on (0705) 325354. Thanks to WeServe for supplying us with the driver.

It was only a matter of time until Hewlett Packard released the colour version of the popular Deskjet 500 printer. It's an inkjet printer which has many advantages over the more common impact dot matrix printers. Instead of hammering ink onto the paper with metal pins, the Deskjet ejects tiny drops of ink. As a result, there is no noise at all, other than the mechanical whirrings from the printer head running across the carriage.

Inkjet printers tend to be a lot faster than conventional printers. 240 characters per second (cps) in draft mode or 167cps in quality mode can be achieved with the Deskjet. That's quite a considerable speed considering the quality mode prints with a resolution of 300x300 dots per inch (dpi).

Of course, throwing wet ink onto paper does have its drawbacks. Blotting will occur if you are using the wrong type of paper. The best paper to use is cotton bond or HP's own JetSeries type, but generally, good quality photocopying paper will yield pleasing results. Don't let that put you off because it takes just a short time to discover which paper is best to feed your pet Deskjet.

Inkjet printers aren't known for being as economical as dot matrix printers, but the Deskjet cartridges will go a fair distance before its chucking-in-the-bin-time. The black ink cartridge will last on average for 500 pages of text, while the colour cartridge will last for 180 pages of solid colour. Changing the cartridges is a very simple job. A press of a button will force the printer to move the cartridge to the centre of the carriage for changing. Another button will automatically clean the printing head should you find dots or lines missing from your printouts.

Paper handling is superb with a capacity for 100 sheets of A4 downstairs and a paper out tray riding on top. The Deskjet has never failed to grab just one

sheet of paper automatically for loading (unlike stupid fax machines!). When the page has been printed the Deskjet will eject it into a pair of arms which then drops it into the paper out tray. This stops the current page smudging the ink on page in the paper out tray. Envelopes can also be loaded, one at a time, by pressing the envelope feed button.

The Deskjet kindly provides access to four different types of fonts. Courier, CG Times and Letter Gothic come built-in as internal fonts, while optional font cartridges will give you many new fonts to use. Then there are soft fonts which can be downloaded from the computer to the printer, but only if you have the optional 256K RAM cartridge. Lastly, scalable fonts can be used using the Microsoft Windows driver - quite useless for Amiga owners! Still, excellent looking printouts using large fonts can be achieved not far off from laser quality, using Pro Page or Page Stream.

As far as printing colour digitised pictures goes, don't expect results comparable to a colour laser printer because you won't get them. However, high resolution digitised pictures look good, far better than a dot matrix, charts and diagrams with solid colour look even better.

The Deskjet 500C is a very good value printer, especially when some retailers are discounting it to well under £600. Impressive paper handling and printing speeds are just a few reasons why this printer is so attractive. The Deskjet is now full colour and it produces beautiful multicoloured Amiga images with no noticeable banding! On top of all that, the Deskjet comes complete with a three year parts and labour warranty! Well done to HP for producing such a flexible high spec colour printer without the house mortgaging price tag. **a**

Quality colour printing
has always been left to
expensive printers, until
now, but Hewlett
Packard's new Deskjet
printer doesn't break the
bank, says Gary Fenton.

Deskjet 500C

DEMO'S

A001 Walker Demo I (1Mb)
A002 Walker Demo II (1Mb)
A025 Horizon Megademo/At Time Classic
A298 Bart Simpson Demo/Decay
A296 Phenomena Enigma Demo
A304 Any vs Walker/E. Schwartz 1 Mb
A310 WWF Wrestling Slideshow
A329 Sickness Simulator/Hilgous
A331 Anti-Lemings Demo/2 Disks, 2 Mb
A334 Batman The Movie/E. Schwartz 1 Mb
A336 Shuttle-Cock Anim./E. Schwartz 1 Mb
A338 Mr Potato Head II/Chris Hill (1 Mb)
A342 Playmates 97/Excellent Plasma Demo
A343 Virtual World Demo
A352 Trackball Animation (1 Mb)
A353 Bass Megademo II
A358 Ray of Hope 2/Majic 12
A359 Ice/Silents
A360 Digital Innovation/Anarchy's latest
A362 Defjam/Pixel Nation Demo
A363 Decaying Paradise/Andromeda
A367 Unicorn Anim (1 Mb)
A368 With Vectors to Heaven/WFMH
A369 Outland/Rebels
A372 Terminator 2 Slideshow (2 Disks)
A373 Altered Perception/Chris Hill
A384 Kick Boxer Demo/Hacktrick
A395 Alpha Omega/P.M.C.
A399 Baywatch Slideshow
A400 Mr Potato Head III (1 MB-2 Disks)
A401 IBB "Maniac" Megademo
A402 The Wall (1 MB-6 Disks)
A403 Vietnam Conflict/E. Schwartz
A404 Alien Breed Animation (1.5 Mb)
A405 In Bed With Madonna
A410 Nightmare On Elm Street
A412 Aliens Slideshow/Prodigy
A413 Hardwired (1MB-2 Disks)
A414 The Punisher/Digital
A416 Colors Demo/Devis

GAMES

G001 Aquatron Star Trek/1 M/2 disks/2 drives
G002 Star Trek/Next Generation
G005 Cave Runner/Arcade
G007 Track Record/Race Game
G008 Truck'n/1 MB-2Disks-2 Drives
G009 Solitaire Card Games
G014 Tanx/2 Player Arcade
G017 Star Trek/1 MB-3 Disks-2 Drives
G018 Amoeba Invaders/Arcade Classic
G019 Pacman 87/Arcade Classic
G021 Return to Earth/Space Conquest
G024 The Holy Grail/Text Adventure
G027 Breakout construction Kit
G028 Blizzard/Shoot-em-up
G031 Golden Fleece/Text Adventure
G033 Drip/Arcade Game
G037 Twintrix/2 Player Tetris
G038 Air Ace II/WWII Shoot-em-up
G044 Chess/superb version
G048 Seven Tiles/Speedball Game
G049 Eat Mine/Emerald Mine Game
G050 Shapes/Puzzle Game
G051 Frantic Freddie/Arcade
G052 Pipeline/Pipemania Game
G055 Quick'n'Silva/Arcade
G059 Wheel of Fortune/TV Quiz Game
G060 Quizmaster v1.0/A. Cheltenham
G061 Property Market/Trading Game
G063 Paranoid: Arkano'id type game
G064 Game Cheats/Codes & Solutions
G067 Mental Image Game Disk 1
G068 Casino Game/Compilation
G069 Space Games/8 Games
G070 Mayhem/Shoot-em-up

G071 Castle of Doom/Adventure
G072 Speccy Emulator & Games
G073 Mogabali/Breakout Game
G074 Adventure Writer
G076 Star Trek Shoot-em-up
G077 Simpsons Shoot-em-up
G078 Ballonacy/Arcade (1 Mb)
G079 Wizzy's Quest/Arcade (1 Mb)
G080 Popeye LCD Game
G082 Downhill Challenge/Ski-ing Game
G083 Destination Moonbase/Lunar Lander Game
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G086 Pair-It/Amos PD (1Mb)
G087 Jeopardy/Rise Style Game (1Mb)
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G094 Star Trek - The Game (1Mb) 2 disks/2 drives
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G098 Bionix/Shoot-em-up
G099 Emerald Mine IV/Boulderdash game
G100 Mech Fight/Sci Fi RPG Game
G101 H.A.C.L. Solutions/Games Hacks
G103 Pom-Pom Gunner/Shoot-em-up
G105 Dragon Cave/Puzzle Game
G107 Monopoly/English version
G108 Nine Lives/Compilation - 9 games
G110 Jetman/Jetpac Game
G111 Scum Haters/Shoot-em-up
G112 Hollywood Trivia/Quiz Game
G114 Sealance/Submarine Warfare
G115 Wacko in Wonderland/Arcade

UTILITIES

U001 Amibase Excellent Database
U003 IFF Fonts and surfaces for DTP
U007 Doze intromaker
U008 Space writer Demo creator
U009 RIM relational database
U010 Visicalc spreadsheet
U011 Jazz bench work bench replacement
U012 North 'C' compiler
U027 Emulators/C64 & Atari ST
U030 Bank N/Accounts Programme
U061 Master virus killer V.2, 1 kills 124 viruses
U065 M-cad, Computer aided design
U067 Crunchers compilation inc. power packer
U070 D-copy backs-up protected disks (most)
U073 Mandabrot. PD compilation
U099 ABPD utility disc, 30+ Utilis.
U109 Darkstar utilities 3/Compilation
U120 SID/CLI utility
U121 Rippers/Instrument/Sample Rippers
U124 C - Light/Ray Tracing package
U129 PDC 3.33/Complete C Compiler
U130 Black Tiger Star Utilities
U135 C' Manual/latest version (4 disks)
U139 Fonts for Red Sector Demo Maker
U140 Wordright/WP & Spellchecker
U147 Drives/Hard to obtain printer drivers
U151 PCQ v1.1c/Pascal Compiler
U152 A64 Emulator V1.01/C64 Emulator
U155 Rainbow Writer/Demo Creator
U158 Trilogy back up disk/Copy compilation
U159 Virus Checker 5.37/Kills 150 Viri
U160 Delta Crew Virus Killers/Compilation
U161 Mandabrot Animator V1.2
U162 IBM PC Emulator/2 Disks
U163 Typing Tutor
U164 ABPD C0mms Pack/Ncomm and JRComm
U165 Door to Door/Route planner
U167 Insanity Tools/203 utilities
U175 TSB Vector Designer V1.1
U176 Vector Ball Editor V1.0
U177 RSI Demo Maker Music Disk 1
U178 RSI Demo Maker Music Disk 2
U180 RSI Demo Maker Utility Disk
U200 Amiga Fox/Desktop Top Publisher
U202 Hard Disk Utilities
U203 Textplus 3.0/Word-processor
U204 Electrocad/Circuit Design
U218 TV Graphics/Video Graphics Clip-Art
U219 TV Fonts/Video Fonts Clip Art
U220 ClipArt for DTP
U223 Amibase II Professional (1 MB)

SOUND

S001 Sound tracker. Music programme (needs ST-01)
S003 Games music creator
S004 Med music programme V.3.0
S006 Med V3.11/1 meg only
S010 Protracker 1.18 (needs ST-01)
ST-01 Instrument disk for Sound/Protracker
ST-02 Instrument disk for Sound/Protracker/Med
ST-03 Instrument disk for Sound/Protracker/Med
ST-06 Samples for Sound/Protracker/Med
ST-07 Speech samples for Soundtracker

EDUCATIONAL

E001 Education Disk (Age 5+)
E004 Education Disk 4 (Age 5+)
E006 Learn and Play (Age 4/5+)
E007 Learn & Play II (5+)
E008 Colouring Book (Age 5+)
E009 ABPD Education Disk 1 (5+)
E011 Learn German (11 to Adult)
E012 Spanish Tutor (11 to Adult)
E014 The Holy Bible (3 Disks)

MUSIC

M002 Groove is in the heart
M015 LSD Music 1
M016 Feel The Rhythm
M017 Technotronic Mega Mix
M021 Pet Shop Boys/Suberbia
M024 Digital Concert II
M025 Digital Concert 3
M027 Digital Concert V
M028 Digital Concert 6
M033 808 State remixes
M034 Synth Music 1
M036 Sound of Silents
M038 100 C64 lines
M040 Simpsons Do The Bart man. 3 disks
M041 19/Paul Hardcastle
M042 Betty Boo 2 discs
M043 Cryptoburners Music
M044 Miami Vice Remix
M045 Bat Dance Remixes

M062 Phenomena Music 1/18 wicked tunes!
M067 Madonna Slides & Music
M068 Madonna Spanky
M071 D Mob music 2
M076 Synth Music 6/3 tunes inc. Oxygene
M080 Janet Jackson/Rhythm Nation 1814
M085 Amazing Tunes II/3 Disks (1Mb)
M087 Vocal Attack 2/Get It Up Remix
M089 Computer Game Music Disk/Compilation
M090 Vocal Attack 3/2 disks - 1 Mb
M093 EON Music Disk/8 tunes
M096 Intruder Music Disk/Vanish
M097 Technomania II Music Disk
M106 Two Toms - Utah Saints
M108 Ice, Ice Baby/2 Disks
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PDM 225 Digital Disco 2
PDM 226 Proton Music Disk
PDE 6 Kidspaint
PDG 86 Crazy Sue
PDG 87 Amiga Columns
PDU 375 MED 3.20 (With MIDI)
PDU 410 Sequencer Utilities

NEW UTILITIES

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PDU 382 MESSYSID II
PDU 383 SPECTRAPINT v3.2
PDU 384 DISKMASTER v3.2
PDU 385 ELECTROCAD v1.4
PDU 386 AMIGAFOX v1.1 (English Version DTP)
PDU 387 WINDOWSBENCH v1.0 (2 Disks)
PDU 388 600 BUSINESS LETTERS
PDU 389 B-BASE II (Excellent, Fast Database)
PDU 390 TEXT ENGINE V3.0 (Incl. Text wrap and
spell check)
PDU 391 FORMS REALLY UNLIMITED
PDU 398 AMIBASE PROFESSIONAL II (Database)
PDU 399 D-COPY (v2.0, v1.0 with Docs)
PDU 400 NEW SUPERKILLERS (V.C v5.37,
Boot-X v4.30)
PDU 402 GOLF RECORDER v1.0
PDU 403 NORTH C (2 Disks)
PDU 404 HAMLAB v0.91 (IFF Converter)
PDU 405 AMPLI 2 (Amigaspell, X-spell, U-Edit, UES)
PDU 406 C-MANUAL (Unarchived, 3 Disks)
PDU 407 OPTI UTILITIES #1
PDU 408 OPTI UTILITIES #2
PDU 409 GELIGNITE FONTS (Professional Fonts)

UTILITIES

PDU 10 Wordprocessing & Databasing
PDU 16 Air Tunnel simulation
PDU 31 Fish #143 RIM Database
PDU 32 Fish #144 Analytic Sheet
PDU 43 Fish #203 Assembler & C
PDU 45 Fish #213 Icons (300 in 8 cols)
PDU 48 Fish #215 Mandelbrot v2.0
PDU 51 Fish #219 Astronomy program
PDU 52 Fish #52 A-Z Text Editor
PDU 72 SID v1.06 (File transfer util)
PDU 80 Fonts & Surfaces
PDU 81 Diskvalve v1.3
PDU 99 Ham Radio Utilities (5 disks)
PDU 101 Menu Maker
PDU 102 Label Designer
PDU 103 Icon Maker
PDU 104 Icon Mania
PDU 105 Crossword creator
PDU 151 Fixdisk
PDU 164 Games music creator
PDU 169 Quick-Base (Database)
PDU 186 Falcon Bootblock creator
PDU 200 Virus Killer Pro v2.0
PDU 207 Perfect Sound v1.93
PDU 262 MED modules
PDU 358 Tetracopy
PDU 359 Genealogy (create Family Trees)
PDU 363 Master Virus Killer v2.2 (Latest)
PDU 366 IBM Emulator
PDU 366 Atari ST Emulator (English version)
PDU 368 Spectrum Emulator v1.2
PDU 369 Fish #379 C64 Emulator
PDU 370 Flexibase (Database)
PDU 371 Nuke v1.3b (Saddam killer)
PDU 374 Quick-Draw v1.2
PDU 377 M-CAD (Design program)
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PDG 59 Seven Tiles (Adventure)
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PDG 61 Electric Train Set
PDG 62 Spectrum Games Vol 1
PDG 63 Spectrum Games Vol 2
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PDG 67 Flaschbier
PDG 68 Colossus (Adventure)
PDG 69 Battle Force
PDG 70 Drip!
PDG 71 Llamatron (By Jeff Minter)
PDG 72 Operation Lemming (£3.00 Charityware)
PDG 73 Twintris
PDG 74 Wet Beavers Game
PDG 75 Tanx The Game
PDG 76 Cubulus (By T. Richter)
PDG 77 Star Trek-The Next Generation
PDG 78 Blizzard
PDG 79 Card Sharp
PDG 80 China Challenge II
PDG 81 Pom Pom Gunner
PDG 82 Wacko Jr. in Wonderland
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PDA 14 Pugs in Space
PDA 15 Moonwalker
PDA 18 Miller Lite Advert 1-
PDA 42 Dragons Lair Demo
PDA 45 Monocycle & Sidecar (1 Meg)
PDA 54 NASA Graphics
PDA 56 Newtek Demoreel #1 (2 Dsk, 1)
PDA 57 Newtek Demoreel #2 (2 Dsk, 1 Meg)
PDA 58 Paradise Slideshow
PDA 68 Walker Demo #1 (1 Meg)
PDA 69 Walker Demo #2 (1 Meg)
PDA 70 Walker Demo #2 (1 Meg)
PDA 80 Walker Demo #2 (2 Dsk)
PDA 82 Enterprise Leaving Dock (Agatron)
PDA 81 Ray Trace Art
PDA 90 Jet Fighter Animation
PDA 92 David Landers Sci-Fi Show #1
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PDA 108 Addams Family
PDA 110 Bruce Lee "Enter the Dragon"
PDA 111 Bruce Lee Slideshow #2
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PDA 124 Stealthy Maneuvres (Eric Schwartz)
PDD 305 Anti-Lemmin Demo (Eric Schwartz)
(2 Meg, 2 Dsk)
PDA 134 The Dating Game (Eric Schwartz)
(3 Meg, 2 Dsk)
PDA 135 Buzzed (Eric Schwartz) (3 Meg, 3 Dsk)
PDA 136 At the Movies 2 (Eric Schwartz)
(1 or 3 Meg, 2 Dsk)

DEMOS

PDD 1 Anarchy Demo
PDD 4 Deathstar Megademo (2 disk)
PDD 7 Elvira Demo
PDD 14 RAF Megademo
PDD 16 Robocop Demo
PDD 20 SAE Demo #25
PDD 21 SAE Demo #32
PDD 31 Anarchy "Ooh it's obscene 3"
PDD 51 Hatrick #1 "Arsenipe"
PDD 52 Hatrick #2 "Smashing day out"
PDD 55 Kefrens Megademo #8 (2 disks)
PDD 62 Northstar Megademo #2
PDD 70 Rebels Megademo
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PDD 107 Budbrain #1 (2 disks)
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PDD 116 Magnetic Fields Demo #41
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PDD 132 Giants Megademo (2 disks)
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PDD 145 SAE Demo #31
PDD 152 Flash "No Brain No Pain" (2 disks)
PDD 153 Billy Connolly Demo (2 disks)
PDD 160 Hatrick "Rave on"
PDD 177 Budbrain II
PDD 179 Crionics "Total Destruction"
PDD 186 Flash Demo #2
PDD 209 Rutger Demodisk
PDD 212 Space Pack #32
PDD 238 Iraq vs Kuwait Demo
PDD 287 Phenomena Enigma
PDD 288 Phenomena Terminator
PDD 292 Batman Demo
PDD 306 Digital Innovation By Anarchy
PDD 307 Virtual Worlds
PDD 308 Universal Intensity
PDD 309 Alpha Omega
PDD 310 Decaying Paradise By Andromeda
PDD 311 Odyssey By Alcatraz (5 Disks-Superb!)

RED SECTOR INC.

PDU 401 RSI Demo Maker (With full docs)
PDU 364 RSI Utilities Disk #1
PDU 392 RSI Utilities Disk #2
PDU 393 RSI Vector Object Editor
PDU 372 RSI Vectorballs Editor
PDU 394 RSI Font Editor
PDU 365 TSB Vector Designer
PDU 395 /6/7 RSI Modules #1, 2 & 3

MUSIC

PDM 5 PDM 5 MFI Electric CLI IV
PDM 6 Winkers Song (2 disk)
PDM 9 Ride on Time & Bardance
PDM 19 Bad - Michael Jackson
PDM 20 Bat Dance
PDM 27 D-MOB Megamusical III
PDM 35 "I think we're alone now" Tiffany
PDM 36 "Land of confusion" Genesis
PDM 38 Miami Vice theme (4 disks)
PDM 40 MFI Vangelis Demo
PDM 65 Digital Concert IV
PDM 72 Popeye meets the Beach Boys
PDM 80 Digital Concert VI
PDM 83 Kefrens Jukebox
PDM 85 Miami Vice "Crocketts Theme"
PDM 91 100 Most remembered C64 tunes
PDM 95 Hi-Fi Demo
PDM 104 BassX #5 Power Remix
PDM 105 BassX #6 Sid youngblood
PDM 106 Betty Boo
PDM 109 Depeche Mode
PDM 110 DMOB Music I
PDM 111 DMOB Music II
PDM 112 DMOB Music IV (2 disks)
PDM 118 Hatrick "Loadsamoney"
PDM 131 Pet Shop Boys Remix #1
PDM 132 Pet Shop Boys Remix #2
PDM 221 Queen - Invisible Man
PDM 222 Guns 'n' Roses
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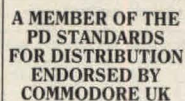
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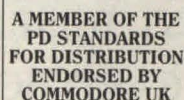


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519 Barniga Sector menu maker
520 Catalogue workshop (2 disks)
518 Ultimate bootblock utilities
173 Noiseplayer v3.0 module play utility (P)
189 ST-00 Soundtracker v2.4 (NP)
226 ST-00 Startrekker 8 channel (NP)
282 MED v3.11b (P)
507 ST-00 Prototracker v1.1b (NP)
58 Fortiss archive utilities compilation (P)
582 Fortiss icon utilities compilation (P)
584 Fortiss antivirus utilities compilation (P)
587 Fortiss text utilities compilation (P)
588 Fortiss graphic utilities compilation (P)

MUSIC

038 Kylie Minogue "I Should Be So Lucky" (2 disks)(P)
175 Kylie Minogue "Made In Heaven" (2 disks)(P)
330 Kylie Minogue "Locomotion" (P)
040 Jean Michel Jarre "Equinoxe" (P)
137 Black Box "Ride On Time" (NP)
147 Debbie Gibson "Electric Youth" (P)
209 Shamen "Move Any Mountain" (P)
286 Utoch Saints "What Can You Do For Me" (NP)
329 MC Hammer "Can't Touch This" (NP)
362 Tiffany "I Think We're Alone Now" (P)
472 Pet Shop Boys "So Hard" (P)
473 Pet Shop Boys "Always On My Mind" (P)
504 Dee Lite "Groove Is In The Heart" (P)
528 Bizzy Nizz "Don't Miss The Partyline" (P)
041 Dirty Dancing "Stay" (P)
024 Crusaders present "Freaked Out" (NP)
351 Crusaders present "Audio X" (NP)
050 DMob 2 (P)
060 DMob 3 (P)
061 DMob 4 (2 disks)(P)
138 Digital Concert 2 (EP)
139 Digital Concert 3 (EP)
140 Digital Concert 4 (P)
141 Digital Concert 5 (P)
142 Digital Concert 6 (EP)
143 Chaos & Slipstream #4 (1Mb)(NP)
144 Byterappers #6 (P)
145 HCC presents "The Model" (P)
149 SAE Amazing Tunes 2 (1Mb)(NP)
160 Sounds Of Knorri (P)
176 Beatmaster presents "808 State Remixes" (P)
178 Trash & TTB present "Bomb The Base" (P)
208 Decon 1 presents "Can I Play With Madness" (NP)
210 Hardcore House III (P)
211 Bay Of Hope II (NP)
223 Girls Need Love (EP)
227 Digital Debussy Volume 2 (P)
363 Classics Volume 1 (P)
226 Amiga Chart Volume 5 (P)
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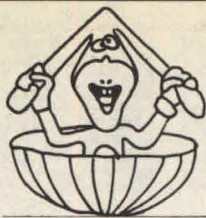
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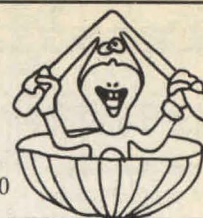
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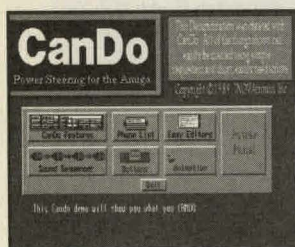
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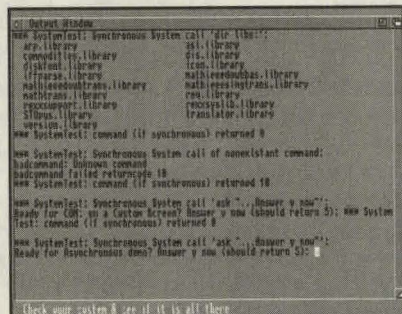
test drive

Fishdisk 565:

Cando demos: There are several programming languages around that can be used on the Amiga, one of the easy ones to use is Cando. You actually use buttons to run the programs you create, what you do is to attach scripts to buttons, and in turn these buttons will start the scripts in sequence, to run programs such as slideshows, Multimedia productions, databases, games etc. All the programs can be made to stand alone. You might have seen it on the AUI Coverdisks. On this demo program (which has to be unpacked because it is so big) there are



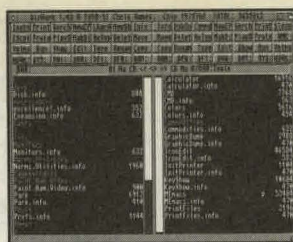
13 different sounds you can listen to and use, digitized speech, thunder, different snoring sounds (or is that the editor in the background?). Also there are several small programs which show some of the programs you can create, if you click on the animation button it will take you to a



different screen and put on a decent animation display, in fact three different animations at once; real multi-tasking, well worth a look at. Supplied with Fishdisk 565 are these other programs:

AddMenu: This program adds an almost infinite number of menus to the Tools menu on Workbench V2.0. It uses the correct Workbench library calls and allows updating from CLI or from within the menu itself, meaning infinite number of functions.

PCompress: A gimmick free and very easy to use

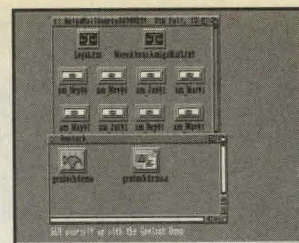


program for most compression requirements.

SysInfo: This is a program which reports interesting information about the configuration of your machine, including some speed comparisons with other configurations.

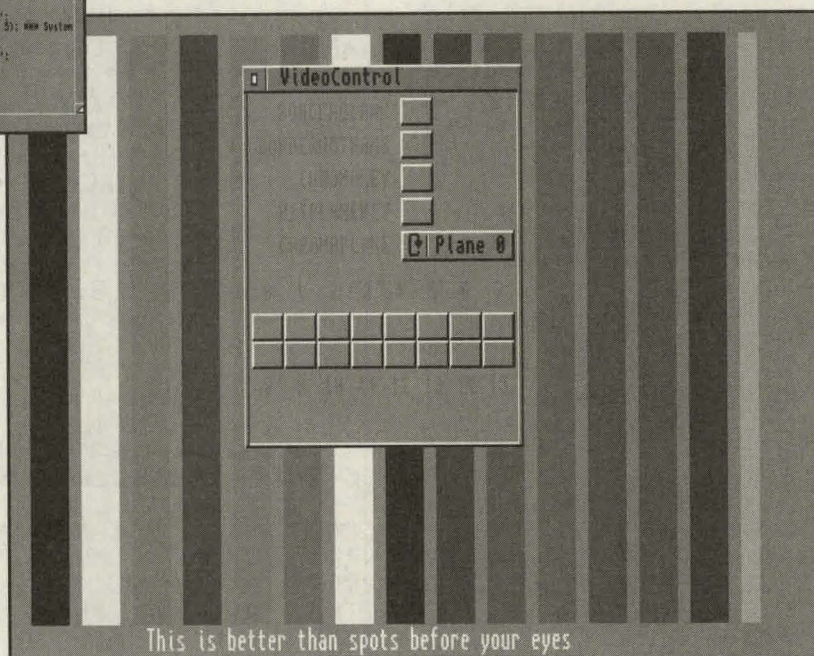
Fish 567:

Amigamail: This is a collection of programs with the source code, so all you C fans this is one for you. There are items such as SCREENS & WINDOWS, ICON IMAGE, SYSTEMTES you start the program, it asks you how many people there are for the menu, what the documents do not say is how you choose them. There is a column on the far right-hand side with a human image and below this are the figures 1/6 1/8 1/4 1/3 1/2 1 2 3 4. These figures I assumed were the measures for the cups and

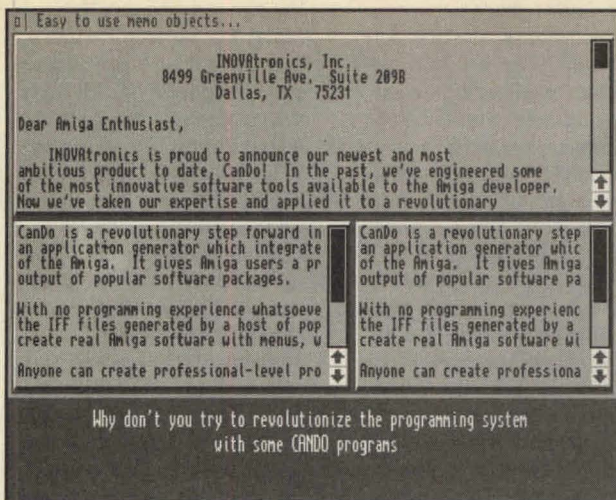


spoons etc (which is correct), especially as the rest of the column read RESET, ACCEPT, ABORT, Click on values until total is displayed.

What you have to do is click on the numbers for the person or persons if there are six people you click on number 2 then 4. There is a good comprehensive food menu for



This is better than spots before your eyes



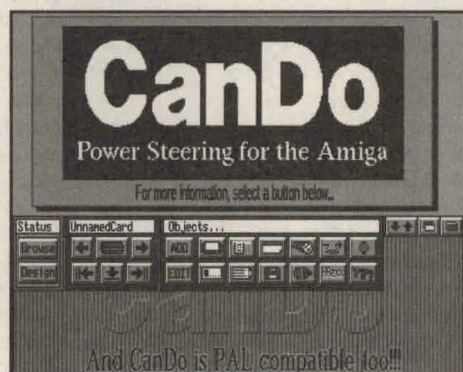
you to select from to make up your meal.

Schoonschip: A pioneering algebraic manipulation program which has been used in particle physics and continuously developed since late 1963.

VMK: What makes this program is its ability to detect new viruses as they come along. Simple quick easy way to stay virus free if you want a variation from the virus killers we put on the Coverdisk...

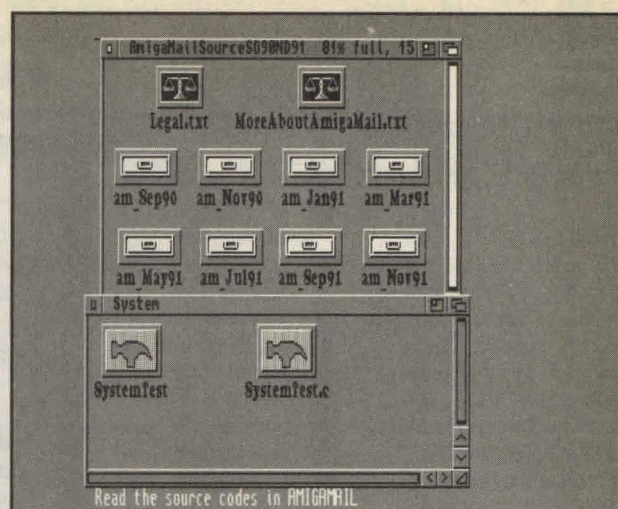
Fish disk 570:

Dirwork: This is one of those rare P.D. Programs that is absolutely fantastic. This is a very flexible directory selector, you can configure just about everything you would want with this program, buttons, buttons-keys, options, screen modes, screen colours, popkeys, tools, window sizes.



Some of the options are that you can double click on a filename of an IFF file and it would be automatically be displayed, double click on a text file to type it, or press the right mouse button to edit it. There is also included with this program a memory and bootblock virus checker, also along with the various items is included a discopy/format and install program with various destinations. You can copy and clone various items so that the date / protection / filenote bits are not lost in the process. There is also a powerpacker decruncher included in the program for text files.

When you are reading a dir or file, if you click with your mouse button on the far left or right of the dir will bring up information about the dir such as the file name protection bits file notes etc. There are quite a few facilities supplied with this program on some of the buttons there are these options, Copy/ Move/ Sleep/

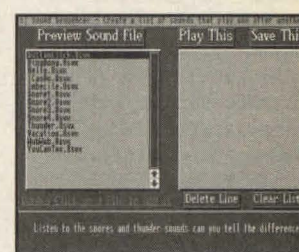


Volms/ Cd/ Print/ Delete/ Type/ Info/ Show/ Playss/ Search/ Hextype, and so on a very powerful program putting it up there with Directory Opus.

A short description of the other programs on the Disk.

Fass: A program which lets you reassign the FONTS: directory at the touch of a few keys without having to use the CLI.

GadToolsBox: A program that lets you draw/edit GadTools gadgets



and menus and then generates the corresponding C or assembly code for you.

MenuLock: A program that lets you "lock" the menu strip of a window at the touch of a few keysView: A text displayer with many controls and features including searches, file requestors, jump to editor etc. **a**

That is it for this month but I'm glad to say there seems to be no shortage of big Fish out there anxious to feed into our Amigas. **a**

Norman Stone returns to show off his catch of Fish this month. Of course, it's as big as that!



amiga

answers

Dear AUI,

I wonder if you can help me solve this (or rather these) problems? I am comparatively new to computing (and incidentally an OAP!) having acquired an Amiga 1500 a few months ago I find the machine and the subject totally absorbing and maybe at times, absolutely infuriating especially in connection with the Platinum Works word processing package which came - among other things - as part of the deal. Problem 1. I find that when running Platinum Works if I want to leave a particular piece of work and transfer to another I tend to get a system request which announces Works!; Platinum works **works** already running and nothing which I have so far found will allow me to transfer to another piece of work without rebooting the whole cabooosh. I can't believe this is intentional; what am I doing wrong? problem 2. As instructed and, like a conscientious Amigaman I filled in the guarantee card enclosed with the Platinum Works bundle and, in due course, from America received an offer for an English version of the dictionary for the sum of \$25. Feeling this to be worthwhile (which, basically, I still think it is), I forked up my cash and received the new version. To my surprise it doesn't seem to have a pound sterling symbol; the symbol on the keyboard prints a Cap L. Is there a hidden pound sign anywhere. I'm hanged if I can find it or is my printer (a Citizen Swift 24) playing silly whatsits with me. It really does seem daft if there isn't! Finally a small grouse about your otherwise excellent publication, how is one supposed to decipher the address on your Amiga Answers page. Isn't it just a bit over the top? And finally, finally, please carry on with your very helpful beginners articles. we're not all teenage experts (bless'em) out here you know!

J.L.Woods Somerset

Dear J.L.Woods, A fairly simple problem this is. Do not click on the icon to start another letter. This will try to reload Works, and as a copy

is already running that is a bit wasteful. The machine does not hang if you select the cancel option, the Works screen is simply behind the workbench screen. Press Left Amiga M to bring it back into view. To start another letter etc, use the OPEN menu item from the Project menu. The pound sign problem could be one of two things. You do not have the correct Keymap loaded. Or the printer needs setting up. The keymap is easy, include the line:

SetMap GB

in your startup sequence. You will have to put the full path name in front of it, depending on where you keep your keymaps. Beware that some software only comes with the USA keymap, and you will have to copy the GB keymap from your workbench disk. Normally you will find the keymaps in the DEVs directory. The other problem is that the little switches, or menu functions on the printer (sorry I am not conversant with the Swift 24) as setting it to use a character set that does not have the pound symbol. There should be a setting for the country, that will cure the problem when set to GB, and you might have a choice of several different character sets. These are normally listed in the manual. Mmmm you will have seen that the letter address has been sorted out. There were a few complaints about that one!

Dear AUI, I'm currently in France and unfortunately I only finish my assistantship next May. Anyway enough of this boring stuff. First of all I would like to congratulate you for your excellent

When writing to Amiga Answers, include as much information as possible about your system, and about which software/hardware you are running. This will help to determine what your problem might be and its solution!

magazine, which it must be said, keeps me going whilst I'm away from home. I'm writing this letter for some information about hard drives and modems. I'm hoping to buy one of each when I return to England. Concerning the hard drive: 1. Which is the best to buy on a low budget? 2. Would I be able to place any software (including games) onto the hard drive, if so then how many games could you fit onto a hard disk. 3. At this moment I have an A500 with a 1/2 meg expansion. Does this mean that with a hard drive I would be able to run and software (PD disks for example) that require 2 or even 3 megs. Concerning a modem: 1. Again which is the quickest modem for a reasonable price. 2. Is it true that I would constantly have a high phone bill using a modem to download software etc. 3. Is there a service similar to the TV's Ceefax that I could use with a modem to receive news wether etc. I'm sorry about the

Andy Eskelson searches out the answers to your tough technical questions.

questions, that's to say, how thick I must sound to you. However I have written several letters to other magazines without having an answered question. I would be very grateful if you would answer my questions as many Amiga beginners like myself are often lost and left behind, as far as the different capabilities of the Amiga are concerned. Keep up the good work

Stuart Platt Bourges France

Dear Stuart, Hard drives are many and varied, I still think that the A590 is a good compromise. It is CBM and that is good from the compatibility point of view. It also has space for extra memory, and that is useful bearing in mind your other points. However there are quite a few drives on the market, and many people are happy with GVP and Supra devices. It really does depend on how deep your pockets are. One point to note, 20 megs is considered a bit small, so if you can go for at least 40 megs capacity. You will be able to use a hard drive in much the same way as a huge floppy, except it is very much faster. Some games will copy onto hard drives, but many have protection systems that will prevent you from doing that. Programs that ask for 2 or 3

megs are not referring to disk space, they are asking for 2 or 3 megs of RAM! with a 590 drive, you can install an extra 2 megs of ram inside it, and thus your Amiga would have access to a total of 3 megs. Modems are much the same as hard drives, there are a lot to choose from. It depends on your pocket, the faster the modem the lower the phone bill (generally) and the higher the price! High speed modems, ie modems capable of speeds greater than 9600 bits per second (nearly 1 K byte per second) are getting cheaper all the time. A couple of years ago you would be paying about 1900 pounds for such a modem, now the prices are down to about 500. Look at the Courier HST range.

Other slower modems are fairly similar. Generally look for modems offering MNP5 error correction, and if they offer V42bis as well so much the better. Phone bills can be high and can be low, it depends on where you dial into. Its the same as a

telephone call cost. The faster the modem the faster you can get off the BBs and save the phone bill. There is a database like ceefax it is called Prestel and is run by B.T. However as they have kicked computer fans in the teeth by killing off the micronet sub section, it's far too expensive just for what you want to do. There are plenty of other BBS systems, some are free and some charge a sub. Don't worry about the questions, yours is not the worst I have seen by a long shot!. You can bet that there are quite a few other people who are wondering about the same things.

Dear AUI,

Help! I thought an Amiga was an Amiga was an Amiga, but not true. I am based in Germany and recently purchased an Amiga 500 together with a 1084S Monitor from the American PX in Frankfurt and I am disappointed to discover that some UK software (Speedball 2, Cadaver, Superbase database prog and others) do not load. What is happening? all the programs load on my friends UK purchased Amiga. Can I overcome it via the keyboard? some advice please!

Jonathan Taylor REME Dusseldorf

Dear Johnathan, It is very likely that you have a USA version of the Amiga. There is no real difference between German and UK Amigas, in fact many UK machines were manufactured in Germany. However the USA uses a different TV standard, and changes have to be made to enable the Amiga to run on the American NTSC TV system, and on the UK PAL system. The main difference is that the USA screen size is 512 lines deep, and the UK is 625 lines deep. That is the main reason for the problems that you have. It might be possible to have the machine modified, but you had better check this with the official repair and service centre.

Dear AUI,

I have a GENISCAN hand scanner and have been pleased with its performance over the years, but the software is dated and the company that

N.B.P.D.L. (DEPT AUI) 37 BASFORD ROAD,

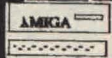
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"demos are boring..."

→ used to update the software has vanished. Is it possible to use Golden Image Scanner updated software or Datascan Professional updated

can see no earthly reason for these programmes failing to print. I have attained your address from an Amiga magazine and am writing to ask if you would be so kind as

amiga, but some can be made to look like PC card slots. When you plug the bridgeboard into the A2000 the slots to the left of the bridgeboard become PC

running. To switch back to the Amiga printer just close the small window that LPT1 opens. When LPT1 is running it becomes the standard LPT1 port that you

support one or other) Check that you have set preferences up to match the printer mode. Create a picture with Dpaint or the like, and use GraphiDump to print it out. If you get the same result then you do have a memory problem with the laser. If it prints out ok, then you have a program problem with Pagesetter. Do a test sheet on the laser and see if it states the amount of memory fitted, you might have to move a few jumpers in order for the extra memory to become active. The monitor switching, Trilogic sell a Scart switch box, I have used a VCR switch box bought at a junk sale, when I used to have my C64, +4, and C128 all running into one monitor so it depends on what you want to switch really.

Dear AUI,

I am writing on the subject of converting files from one computer to another I know it can be done because when I used to have an Atari 1040STfm a couple of weeks back, I had a lot of demos. not demos of games, demos written by demo crews to show what the machine is capable of. They had modules (music made up of samples and played the maximum of four samples at one time) and pictures that were mostly low resolution on the St that is 320 by 200 pixels and 16 colours maximum out of a palette of 512. So please could you tell me if there is a program in the public domain that can convert ST pictures/modules and samples because I have a lot of disks with pictures and modules etc that I would like to use and improve on the new Amiga 500+ Plus I have another question I would like to ask you on the subject of virus killers. Recently I copied the master virus killer from a friend but for some reason it did not work on the new machine. I thought it could be that the software was looking for the old Kickstart 1.3 so I thought I'd ask you if the new version from Amiganuts United PD library would actually work with the new Plus machines if not, could you tell me what other virus killers are as good

all been done

software.

William McLucas London.

Dear William, I do not know for sure, but it is fairly unlikely that other software

to advise me exactly what I can do to get any program to print from the list of programmes on the hard card. It is not a hard disk as such as the hard disk light does not

slots, the bridgeboard 'bridges the gap' between the Amiga and PC slots, hence the name. The Bridgeboard has a separate 128K of dual ported ram that acts as a buffer between the Amiga and PC sides of the system. Once the Bridgeboard is installed, you can fit standard PC cards and use it exactly as you would a normal PC. Another thing that you can do is attach a PC hard card, AND with special software this can be used by the Amiga as well. I suspect that you have a 20 Meg Hard card that has been partitioned into two 10 meg sections, one for the Amiga side and one for the PC side. By using the jdisk device on the Amiga side you can make the PC disk look as if it is an Amiga device. There are other programs that enable the transfer of data from the bridgeboard to the Amiga and back again. (Aread, Awrite) If you look in the Amiga drawer where you opened up the PC screen you will find a couple of other icons. One is PCdisk this is used when you have a setup the other way round, ie the hard disk is on the Amiga side and the PC has none. PCdisk will allow the bridgeboard to access the Amiga disk as if it was a PC hard disk. The other icon is what you will be interested in. It is called LPT1 and looks like a printer. When you double click on this icon it will switch the Amigas Printer port through to the Bridgeboard, note that you will not be able to use the Amiga to print anything while this program is

will be familiar with on PCs. remember to set up your software accordingly.

Dear AUI,

Please can you help me! I have recently bought the Kyocera F-800T laser printer. The printer works fine when I print documents using the word processor, but when I wish to off my DTP the printer splits my document up and puts them onto three separate sheets of A4. I must mention that I have put into the printer 2Mb of ram making a total of 2.5 Mb. I bought the printer from Action computer supplies but they are not the problem. I have looked throughout the manual supplied with the printer but I can't find anything to help me cure the problem, I hope you can. I am currently using A500+ and an A500 (the A500 not actually plugged in yet) Dataflyer hard drive with 56Mb and a cortex 8mb with 4mb fitted. The WP is kindwords V2.0 and the DTP is pagesetter V1.21 I decided to buy this printer after reading the June, July and August issue of AUI which is about laser printers and actually shows a picture of my printer. I would also like to know if it is possible to connect two computers to one monitor using CVBS input or perhaps more Amigas. My monitor is the Philips 8833 Mk1

Mr J.M.Johnson Leigh-on-Sea

Dear Mr Johnson, You seem to have done everything that I would have suggested but the results that you sent in with your letter still suggest a memory problem. However, check the printer drivers first. I assume that you are using the Kyocera in HP mode or Epson mode, (most lasers

before"

will run with your scanner. They tend to be fairly unique combinations of hard and software. You could try asking Golden Image or Datascan and see what they say.

Dear AUI,

As a computer programmer, I was asked some weeks ago to organise a word processor. on a friends A2000, As this was purchased second hand there were no manuals available so it has been a bit of a trial and error attempt to master the operation. The printer attached at the moment is a HP PaintJet which operates quite satisfactorily on the Amiga side, but when the hard card is accessed and the WP entered under their various directories the programs work very well but do not print anything, not even the printing head moves. I have installed Galaxy, Xchange, Quill, Word5, and the WP in First Choice, and have tried installing every type of printer in these programs setups, including 8 different types HP and 10 Epson models. I have even replaced the HP with an Epson LQ and installed this particular printer in the setup of First Choice. I am in the position now, after being told by HP that the HP driver was the problem, that I

indicate a disk when operating the 5 1/4 floppy, so I can only assume that there is a 10 Mb card installed. There is also no connection between the 5 1/4 disk and the 3 1/2 the latter only operates on the Amiga side of the machine.

Mr E.L.Rowden Teignmouth Devon

Dear Mr Rowden. It is very easy to see why you are getting nowhere. You are dealing with two computers here not one. try to sort out some manuals, you need the A2000 manuals and the Bridgeboard Manuals. The Abacus book, Amiga For Beginners would do instead of the A2000 manual, but it will not cover everything. Now to your problem. The A2000 has a unique ability to have another computer fitted inside it. This is known as the Bridgeboard. This is in fact a complete XT type PC (512K ram) or an AT type PC (1 mb ram) as the machine was bought second hand I'll assume it is the XT Bridgeboard. There are expansion slots in the A2000 just like in a PC, but two of them are rather special. These are the bridge slots and are approx in the centre of the expansion bay. All of the slots can be used for the

it's

as, or even better than this one?

Keith Swaby Liverpool.

Dear Keith, There might be some software about to do what you want, but if there is I've never come across it. Demos are boring, out of date and generally it has all been done before. There are disks and disks crammed full of Amiga demos, why not get a few and have a look. My advice would be to reformat your old disks and use them in the Amiga.

As for Amiganuts, why not ask them? Generally newer software will be more compatible, but only if the programmers follow the rules. The virus killer; I think that Virus Checker 5.33 and above by John Veldhuis works Ok on WB 2.0 so give that one a try.

Dear AUI,

I am having a number of basic problems which perhaps you can advise me on. I bought the following about three years ago which for a number of reasons I have had little time to use: Amiga A500 bought on the English market. Star LC 10 colour Printer bought on the German Market Philips 8833 monitor bought on the German market. These were supplied with Workbench 1.2 and similar generations of Extras and Dpaint. My intentions were and remain to use this system for the following: A word processor for standard letter writing. Use of educational Software for my children (ages 6 & 8) Storage of typed data. Limited DTP with simple colour graphics such as letterheads. Printing results of our colour art (attempts) from Dpaint. My problems are exacerbated by a general lack of computing experience and a difficulty in decoding computer speak articles. I need implicitly, do I really have to dive into CLI/Basic to achieve these targets? I can only get a colour test print from my setup I can't seem to print the colourful screen displays from Dpaint and my workbench plus Dpaint don't want to come together. I have heard of a printer driver, is that what I need? I presume that I need a A501 expansion (which hopefully a dunderhead like me

could fit) but do I need to change my workbench to upgrade? What's the difference between Workbench 1.2, 1.3, and 2.0 anyway? I have difficulty in finding dealers in Germany who can breach the normal language barrier as well as the computerspeak element and my intellectual incapacity! So, what is the optimum user friendly/value for money software that could meet my requirements? I would be grateful for your advice if given in very simple terms.

Gus Pidgett RAF Rheindahlen.

Dear Gus, Yes it is the printer driver that you need. It sounds as if you only have one drive, so this could be a little tricky to sort out...

You will have to do a bit of CLI work to copy the correct driver into the devs directory. Printer drivers are simply small programs that convert the output from the Amiga into a format that is compatible with whatever printer you happen to use. There are lots of printers and lots of drivers. On WB 1.2 you might be lucky and have the driver already in the correct directory. To check this (USE A COPY OF YOUR WORKBENCH DISKS ONLY!!!) activate the preferences program, and select change printer. Scroll through the options and see if a printer called EPSON_JX80 is in the list. If it is, great you will not have to do too

much work! Simply make sure that it is in the middle select box, and click on OK, that will get you back to the main preferences screen. Then click on save. This will make sure that that printer is always used. Reboot the machine and your new printer driver will become active. There are some other printer drivers on the extras disk, (especially in WB 1.3) you will have to copy the driver to your WB disk and the CLI is the best way to do this (unless you have some sort of CLI utility). To use an Amiga efficiently a 2nd drive or preferably a hard drive is needed. Extra Ram is essential nowadays because many programs will not work with the original 0.5 Meg of RAM. Fitting a RAM expansion board in the trapdoor is easy. Open the door (the hardest part) carefully plug the expansion in ensuring that the pins are aligned with the socket. Replace the door, and try it

out. There are lots of ram expansions available, not only from CBM but get one with a clock on it, its not that much more expensive, and it is worth it. The workbench types... They all perform the same job, but they are logical advancements of a program. The 1.2 system was a bit sluggish, and had a few bugs. The 1.3 was faster and less buggy, the printer drivers were much improved, 2.0 is the current Wizz Bang version, with all sorts of enhancements.

Get a copy of Amiga for beginners by Abacus, that will set you straight on many points of the Amiga and you will not feel quite so out of touch with the jargon. Its not much different from HUD, fly-by-wire, 6:1 bypass jets, which you will have heard about at the RAF, it's just another set of terms to use. You will notice I use the term WB rather than Workbench, it saves a lot of typing! Programs... A personal choice really, Educational software is not too common but there is more and more coming out onto the market. Get a copy of AUI's Amiga Buyers Guide, that will list the latest known software for you. There are quite a few software packs about that you could get that will give you a range of software to use at a reasonable cost such that you could use it to try out various things, and not feel too bad if you have to buy another package. I have gone through a few products now, and as far as wordprocessing goes I now use Protext, but that is text only. As a starting point try the Works! platinum edition. That's an integrated system giving you the basic office system of word processor, database, and spreadsheet (and a few other things as well) I used to use the earlier version for quite a few years until I opted for Protext. The Works can do a sort of limited (VERY) DTP, in that you can merge some graphics with it, but it is a messy process. Kindwords can handle graphics, as can many other WP systems. How deep are your pockets?

DTP systems are out there, I use pagesetter II with some great results, however, it takes twice as long to WP with a DTP system as it does with a straight word processor. I write with Protext and import the text into pagesetter, its faster that way. Have a look in the PD libraries, you will find quite a few gems there that will cost not a lot and may suit your needs to a T. I'm sorry I am being a bit vague but software is like that, I'm happy with the complex stuff and I think nothing of hacking the startup sequence of the Amiga to get it installed to my satisfaction.

However, as you say that is not everyone's cup of tea, so the simple things are sometimes much better for some people. A final piece of advice would be to find a good shop, or computer club, someone who can show you what to do is worth 10,000 printed words. Judging by the number of letters I get from RAF Germany there must be an RAF club somewhere!

Dear AUI,

I am writing to you for help in un-archiving the utilities on coverdisk No9. I couldn't get past the line DELETE DF0:#?.IZH (return), where I ended up with a UNKNOWN COMMAND error in both the CLI and Shell and whenever I type in the line IZ X RAM:SNAP.IZH UTILS: (return). I made a duplicate copy of the coverdisk and renamed it UTILS as per instructions in the magazine and then deleted all the files except "Read Me First". Could you possibly let me know what I am doing wrong?

T Deverick West Lothian

Dear Mr Deverick, The lines printed in the magazine which tell you what to type in were printed in a serif typeface. This made the letter "I" and the letter "L" look very similar to each other. IZ should read LZ and IZH should read LZH. This will instantly remedy your problem. Sorry about the typeface but from now on all

listings will be in a simple sans-serif typeface.

We have also reduced the amount of typing necessary to use the coverdisk.

Dear AUI,

I have purchased AUI magazine for February which includes Superdisk No9. In order to use the disk fully I have to make a copy. No way can I get my computer to copy the disk. If I try dragging one icon onto the other, or using DUPLICATE from the Workbench menu I get the same message "Error while opening: 212". If I try diskcopy through Shell all I get is the usage message. The net effect is I am unable to use any of the utilities on the disk. Other disks copy quite normally. Can you help please? My computer is an Amiga 2000HD.

Gerald Becke Middlesex

Dear Gerald, Sadly you were not alone with this problem. We heard from a few other people that could not duplicate the disk through Workbench. For some obscure reason most Workbench 1.3 machines refused to copy the coverdisk. Fortunately, we have now rectified this problem. But for the moment the next best thing is to enter the CLI or Shell and do the copying manually.

You didn't type in the diskcopy command properly and that's why it threw the usage message at you. What you should have typed is this:

```
/sans-serif font
system/diskcopy from df0: to
df0: (RETURN) /end sans-
seriff
```

Type the line just as you see it, pressing return at the end. You can replace df0: with the name of any other disk drives attached to your Amiga.

If you have an A500 with an external drive then the second df0: can be replaced with df1:.

This will copy the disk in df0: to the blank disk in df1:.. A1500/2000 owners should note that their external drive is usually df2:, not df1:.

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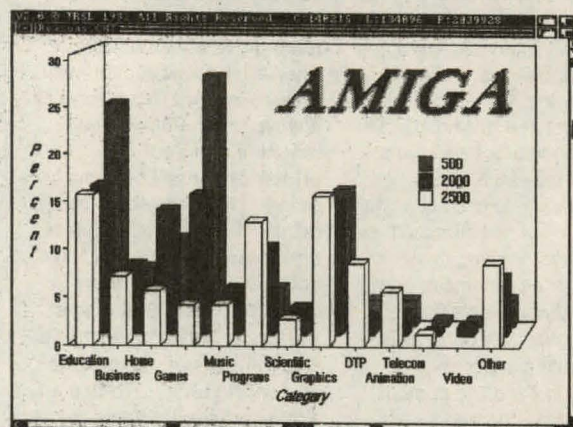
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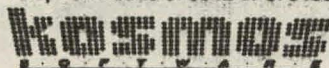
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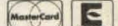
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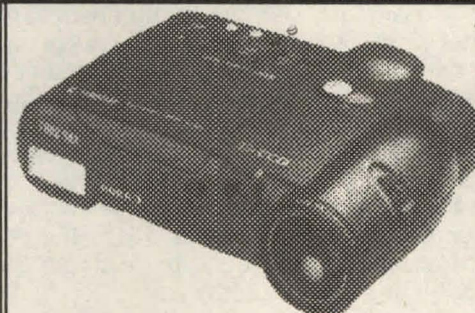
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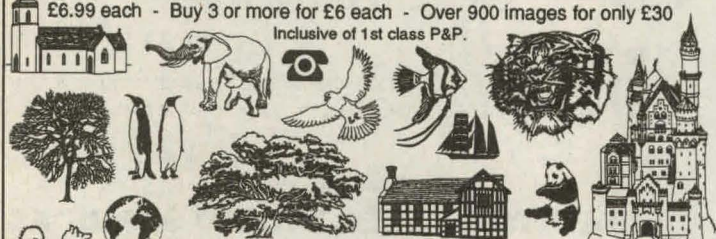
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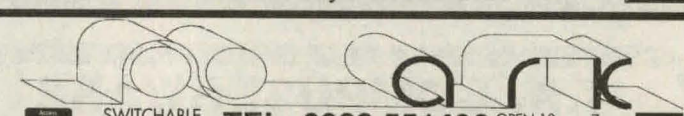
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DM 5 per disk. We have about titles and have been going for eight months. Thanks for your help and keep up the PD reviews!

Steve Groom Enterprise PD Germany

Dear Steve, We are pleased to hear that you are providing a good service for the British forces in Germany. I have already forwarded the relevant information about obtaining commercial software to you. I am sure the Forces serving in Germany will read your above mention and contact you for their Amiga software. We are glad to be of service.

Dear AUI

Just a short note to thank you for picking my name as a winner for the UTOPIA Competition in January's issue. I only purchased my Amiga in the middle of January and purchased a few magazines. So you can imagine my surprise when I found that I

had won a prize in the first competition I had entered! Utopia is certainly addictive, my first real game taking from 8pm Saturday night well into the small hours of Sunday! Thank you again

Karl Mason Norwich

Dear Karl, Welcome to the world of the Amiga! You see it is already bringing you a better time than you could have had in any other way. Now you see why we included a competition for Utopia. We don't have too many games comps but Utopia certainly merited it. I'm glad you enjoyed it. Keep on entering the comps, you might strike lucky again. (All winners of this competition are listed on page 37 of this issue)

Dear AUI

On 30th January I ordered from AJPD 20 3.5" disks with labels at £10 plus 75p p&p, as per their advert in the February issue of Amiga User. Although my cheque was cashed on 5th February I am still awaiting the delivery of the above goods. The advert stated that the goods would be despatched within 24 hours of receipt of order. I have requested that either the above goods or a refund were sent by return post. As you can appreciate I am very disappointed that I have not received the goods. Do you know of any reason for this situation?

Mrs J Ripley North Humberside

Dear Mrs Ripley, We have received recently a number of letters from disappointed people who have written to AJPD. We are very

disturbed that an advertiser can simply not fulfil orders in this way. We too have tried to contact AJPD without response. We cannot therefore give you an answer as to whether this organisation is still in existence, which a number of letter writers have asked us. However, we think you should do two things: 1. Contact your local Trading Standards Officer - probably based at your local Council and explain the situation 2. See your local Police and get them to contact the Police nearest to AJPD. You might also be able to take out a County Court summons against the owners of AJPD personally, as we believe that they were not a limited company. Our Accounts Department check out, as a matter of course as best they can, the financial reliability of advertisers but as in any commercial situation, conditions change as someone who seems all right initially may well turn out later not to be so. So far as we know until this last month AJPD delivered what they promised or at least we did not get any information to show differently. Another piece of advice that is worth following is always to make mail order purchases on a credit card. That gives you a greater measure of protection.

Dear AUI

Having just started reading a variety of computer magazines since purchasing an Amiga 500+ in December 1991, it has not escaped my notice that computing as a leisure activity

provides a necessary escape itself from the real world. However your response to the observations of Professor Provenzo's regarding the essential content of Nintendo games is one of the most crass statements I have heard. If indeed some kids' fantasies consist generally of violence and mayhem then that is cause enough for concern. The culprits are undoubtedly the huge multinationals who have enriched themselves through, in part, the direct exploitation of kids in the Third World. Nor have they hesitated in using real violence and mayhem to maintain such oppression. Having robbed such kids of their childhood they then turn to their privileged peers in the West and warp and debase their videos, computer games, cartoons etc. We're not talking about the odd Batman K.O. here, we are talking about the cumulative effects of punch/kick/boom hour in, hour out, day in, day out. Thus have the real big perpetrators of violence, the Multimedia owning multinationals, run by supposedly civilized adults, found their own corrupt values and priorities reflected in the minds of kids. Come on clever people of the computer world, get your feet on the ground at least, even if your head is in the clouds. Computers are a marvellous expression of human thought and ingenuity, what a pity your correspondent used neither.

M Taylor Dundee

Dear M. Taylor, While no-one has conclusive evidence of the results that the kind of games you refer to have on kids, no reasonable person can deny that the effect of a constant diet of dangerous material - whether physical or psychological - is likely to be extremely damaging. However, I'm not so sure as you that the "Multimedia owning multinationals" are clever enough to achieve what you think they have. The human mind is pretty tough. What are their values? Probably not much more than getting

as much money possible as quickly as possible. And wasn't it Dr Johnson who said a man is never so innocently engaged as in the pursuit of money? I am a believer not in the conspiracy theory but the cock-up theory of history. There are evil people about but the major problems are caused by stupidity, thoughtlessness and lack of consideration for others. And of course there are ambition, intolerance and fear. These can be a lethal combination without any need for sinister plots. Yet the point you make about "punch/kick/boom hour after hour" is surely a valid one. Though it is difficult to separate what is "natural" i.e. what is embedded in the universal subconscious of the human race like the urge to survive, and the "learned" such as might be the result of brainwashing children. Some kids were recently asked in a classroom with computers what were their favourite sounds, The boys, primary school age, immediately shouted that it was "Machine guns!". Were they showing just the "natural" aggression of the young male or was it the result of all those console-based shoot 'em ups learning? I don't know but to try to eliminate violence from the human race I think is a forlorn hope. However, I do think we've come a long way from the picture we have of primitive beings. We live in cities in a relatively amicable neighbourliness. We help each other not infrequently. We cooperate instead of competing. All of which gives me - and I trust you too - some hope that even with the exploitation you rightly say happens, devices like computers and the quality of humanity itself can help us resist and defeat the pervading and maybe even "natural" violence that feeds man's inhumanity to man in all its forms.

Send your letters to:

au

116-120 Goswell Rd
London EC1V 7QD

Dear AUI

I am writing on behalf of many readers of your mag here in Gibraltar, the reason being that we find that extras, like 'Grooves' in your February issue are missing, and when we ask our newsagent as recommended, we are told that: "It didn't come with it". Would it be too much to ask if you could look into the matter at your earliest convenience, for there is very little we can do

developed an error because it's started telling me I've got some spare cash. Ridiculous of course! However, it doesn't pay to argue with your marital partner so I will believe what I

there's really no good reason. Seriously though, PC prices are apparently falling through the floor, Amiga prices aren't. Is there something I don't know about PCs? Do they word-

that price. But - and it's a big but - the Amiga has qualities as in graphics and video that are so special I doubt even a 486 can match them, especially if you upgrade to

own "Casket Quarterly". This had been, however, just a local publication with a subscription of only some 78 morticians and embalmers. Due to a lack of advertising support, we needed

"punch/kick

/boom hour after

from this side of the world. Thanking you in anticipation.

Mr F P Buttigieg, Gibraltar

Dear Mr Buttigieg, It seems that your letter arrived a bit late for us as the "Grooves" supplement was in February 1991. But nevertheless, you should have received it. When your newsagent tells you that it didn't come with it then you must tell him/her that you want it anyway and he/she should at once contact the wholesaler and demand it. For, as in the question of disks, we never send out magazines without the cover mount, whatever it is. As a last resort, write to our distributors, COMAG. We would send you whatever it is ourselves but it is important that COMAG know any such problems so they can solve them.

Dear AUI

I've got a problem and if you can't help me I'm going to do something I might regret. It's an affaire de cur (I feel like a dog). Another computer is trying to come between me and my Amiga and I don't think I've got the willpower to resist. For three years now I've been an Amiga amigo. I've gone from a casual relationship with a bog standard A500 (which I bought about 30 seconds before they started software bundling) to a marriage to a A500 with upgrade, A590 20 Meg HDD with 2 Meg RAM, second floppy, LX800 printer, portable TV and a boatload of software. I mainly use Protext 5.5 and ProPage 2.0. My daughters use DPaint3, my son plays games. Occasionally I run QB and QB Tools. Every month I work out my debts using a Maxiplan spreadsheet. The spreadsheet has obviously

am told. So while I've got it, the spare cash I mean, I'm gonna spend it. The plan is that in six month's time, when I shall have amassed about £1500, I shall go and buy whatever is my current dream machine. Things like A1500s, WB 2, 52 Meg HDDs, A800s (if they exist by then), CD ROMs, Accelerator cards and all manner of such like have occupied my mind over the last few weeks. And then, disaster... I'd already bought and read the five Amiga mags I buy each month and was still in need of a fix of compu-read (computer journalism really screws you up - but then you'd know that better than me). I bought a copy of the cheapest mag I could find (a PC mag, £1.19 with a free disk) and suddenly my world is starting to fall apart. I'm in danger of embarking upon a relationship which will leave my A500 relegated to my son's bedroom, hoping for an occasional kind keypress or a tender disk-insertion from me while I sport myself downstairs with a flighty new lover. You can see how serious it is, I need help.

The figures are very depressing. For my £1500 I can buy processing power, storage capacity and performance which I could only dream about in the Amiga. If I choose wisely, going for a 386SX at 20 or 25MHz, I can add CD ROM, RAM (up to 32 MEG in some cases), huge hard drives (measured in Gbytes) and all manner of other stuff at much less than I'd pay on the Amiga route.

Please tell me I'm wrong. Tell me Dave Adams (a PC owning friend of mine) wasn't always right. Most of all tell me why I should stick with Amiga; because on the face of it

process or DTP less efficiently than the Amiga? Do they crash more often? Do they do or not do anything I don't know about? Incidentally I shall continue to buy AUI even if I do switch - it is easily the best mag and disk on the market.

Mike O'Neill West Midlands

Dear Mike, To get right to the point, no PCs don't do DTP or W/P any worse than the Amiga. In fact to the contrary, on the whole you can do both better - not necessarily cheaper but probably better. Though if you want DTP you'd possibly be better off with a Mac. And there's the nub of it. It depends on what you want to do. There are certainly areas where the Amiga is superior to both MS-DOS based machines and the Mac and in most cases it is cheaper too. Where it does not score, at the present, is in the vertiginous fall of prices in PCs. And, of this you can be sure, the ever greater drop that is coming in the course of this and next year. The main reason is that Intel who make the largest number of chips for most PCs are being challenged through a legal decision the end of last year by AMD and Chips and Technologies. Both of these companies are now making 386 chips and will probably move forcefully into the 486 and Intel's proposed 586 range too. They claim to make chips of 10% more power at 50% of Intel's price. That will bring the prices crashing and I would forecast that you will be able to buy a 486 machine for under £1000 by the end of 1992. So if it's sheer power you want, you won't find the Amiga able to compete at

an 030 or possibly an 040, where the prices too are falling. Strangely too the Amiga has the advantage, at least from Commodore's viewpoint, of holding its

price better than PCs. And if you were to go out and buy a PC at the prices you state, you might find yourself kicking yourself for not having waited a little longer and got it at half the price! The Amiga has a touch of class. It has, thanks to Jay Miner and its originators, quality. I think you can't go wrong with the best in any field. It may cost a bit more but it's generally worth it. And anyway, shop around I think you might pick up an A3000 shortly for your budget and there are some really enhanced chipsets coming. You wouldn't want to miss those would you? And I bet Dave Adams will be green with envy then!

This is a letter we received recently from the U.S.A.. It isn't a usual letter to AUI, but we thought it worth publishing:

Dear AUI

My name is Geoffrey ("Buster") Tucci, co-owner of Dr. T's Funeral Home. I am interested in receiving a complimentary copy of your publication "American Funeral Director" with the aim of acquiring a subscription. We've dabbled in publishing a little bit ourselves in the past with our

to disco ntinue this periodical. In any event, please forward an issue of your fine publication (so I've been told) as we are especially interested in advertising so me potential

hour"

products we plan on "bringing to market". Contrary to the belief that this is a "dying business" (no pun intended, ha, ha), we boast that business is alive and well in Needham, MA.

Geoff Tucci New York

Dear Mr Tucci We believe you may have confused Amiga User International with another publication of a similar nature. However, we would be happy to exchange a subscription to AUI with your own "Casket Quarterly" which sounds most interesting and not unsimilar to some of the other Amiga magazines published in the U.K.. We have for some time been compiling a regular supplement entitled "Death and the Amiga" for those of our readers who bought the recently successful game "Necrophilia". Is there some business relationship between your funeral home and the Dr T's whose musical software is so often played at funerals in this country? We understand it is very popular especially at cremations for those who play the organ. Looking forward to receiving your magazine.

Yours sincerely Bud Venemous

fat lady sings special

Blazmonger

THIS IS THE FASTEST AMIGA GAME EVER WRITTEN — NOTHING ELSE EVEN COMES CLOSE! Tired of playing TURRICAN? Is the BEAST a pussycat?? Does the KILLING GAME SHOW play like RERUNS of HOME SHOPPING Network??? GET A LIFE!!!! BLAZEMONGER animates at 200 FRAMES PER SECOND — so blindingly FAST that you need TWO MONITORS just to WATCH THE INTRO!!! Forget C! Forget ASSEMBLER! Forget all those SLOW, WIMPY LANGUAGES!! BLAZEMONGER is written in 100% CRAT YMP MACHINE CODE for the ULTIMATE in SPEED!!! BLAZEMONGER goes DIRECTLY to the AMIGA HARDWARE for unmatched performance. While BLAZEMONGER is being played, warm boots (ctrl - A-A) have ABSOLUTELY NO EFFECT. In fact, you literally CANNOT TURN OFF THE AMIGA because BLAZEMONGER takes over the power switch!! (How 's THAT for a safety feature??) At the same time, POWERMONGER sends thousands of volts through your power cable. SOLDERING IT TO THE

WALL OUTLET, assuring that UNDER NO CIRCUMSTANCES can you EVER accidentally stop this game. Copy protected? You BET!! BLAZEMONGER uses disk protection, dongle protection, "look up the word in the manual" protection, "look up the word in the DICTIONARY" protection (Webster's 4th edition), 40-number YALE COMBINATION LOCK protection, and an impenetrable TEF LON COATING around the entire disk!!! And for your added safety, your high scores are written to the super-protected MASTER DISK, so the pesky scores CANNOT ESCAPE

and post themselves to THOUSANDS OF BULLETIN BOARDS, bragging about their MAGNITUDE!

Multitasking? WHO NEEDS IT?!? BLAZEMONGER is SO AMAZINGLY FAST that it takes LESS TIME to COLD BOOT on our custom OS than it does to SWITCH SCREENS!! In the time it takes you to run a stupid "clock" program in the background, you can play FIVE FULL GAMES of BLAZEMONGER!! YOU DON'T NEED ANYTHING ELSE RUNNING!!! Playability? NO CHANCE!! The RAW SPEED of BLAZEMONGER is so WILDLY INTENSE that nobody has EVER beaten this game. You will literally - and we do mean LITERALLY! - feel WIND AGAINST YOUR FACE as the images WHIP past your glazed eyes. The average player dies in 15 DIFFERENT WAYS before he can even PLUG IN THE JOYSTICK!!! The best-known high score is in the NEGATIVES!!! Speaking of joysticks...

BLAZEMONGER supports 2-button joysticks, 3-button joysticks, 3-button mice, 6-button shirts, 24-button ELEVA TOR PANELS, and even 256-button TELEPHONE OPERATOR SWITCHBOARDS to give you precise control over nearly ALL of the 1073 BRAIN-BLASTING ULTIMATE WEAPONS available at ALL TIMES. Does BLAZEMONGER have a 2-player mode? GET REAL!! BLAZEMONGER supports NINE SIMULTANEOUS PLAYERS through the use of CUSTOM JOYSTICKS. These little beauties can plug into the serial port, parallel port, SCSI port, 2nd-disk-drive port, video port, coprocessor slot, RGB monitor port... even the TWO AUDIO OUTPUTS!! And you can add MORE PLAYERS by modem, FAX, or GENLOCK!! Eat your heart out, Clement Chambers! So, you C and assembler wimps... go back to your stupid, lazy, futile, high-level software engineering TRASH. Go play "Monopoly" or something. There is only ONE TRUE GAME for the Amiga, and it is BLAZEMONGER. Only \$9.95! Look for it in your favourite Amiga software store — it's the package shaped like a plastic explosive wrapped around a lit stick of dynamite.

...follow up messages:

*This Blazemonger game sounds really cool. Can nine people really "play it at once?"

BLAZEMONGER can indeed be played by nine people at once. Fortunately this WIMPY LIMIT has been overcome in the soon-to-appear "BLAZE MONGER II: THE FINAL BEGINNING. This sequel allows FOUR HUNDRED simultaneous players, provided you have enough bathrooms.

Where can I get it? I haven't seen it advertised in any magazines!

BLAZEMONGER is not advertised in any of your WORTHLESS magazines. Real gameplayers KNOW where to get it.

"I didn't know audio ports can be INPUTS!

They are, if you feed back enough volts into 'em!! The authors of BLAZEMONGER are the ULTIMATE PROGRAMMERS. They can get around ANY such trivial details. (In fact they are working on BLAZEMONGER hard-disk installation for people who do not own hard disks.)

"A friend of mine got killed in BLAZEMONGER before he even TURNED *ON his machine.

The next version will have an even MORE SOPHISTICATED algorithm; you don't even have to OWN an Amiga to lose the game!! BLAZEMONGER periodically checks your bank account. When it senses that you have enough money to BUY an Amiga, it projects a big, flashing "GAME OVER" message on your wall.

"BTW, how do people get thru the copy-protection? I understand that you have to send the author \$5.00 each time you want to play, and he'll call up your machine to enter the 32 digit keycode.

This RUMOUR is a VICIOUS LIE. It is a thirty-"three-" digit code.

"Yea, where is the new copy of BLAZEMONGER anyway...

BLAZEMONGER III will be ready Real Soon Now. It features more graphics, more speed, more sound, more speed, and more SPEED than ever before. And did I mention MORE SPEED? The game is SO FAST

that we weren't able to "write" BLAZEMONGER II — it leaped off the disk and into the upper atmosphere before we could catch it!!

"My copy (version .0009) gured after I completed the first "level...

Your Amiga either has a hardware problem, or you are doing something wrong. BLAZEMONGER has no bugs. I'll bet you are a pirate.

"40 seconds of pure excitement, and to top it all off, I can out "with a POSITIVE score of 4!!!!!! I think this is a new record. *(C all Guinness)...

That is a trivial score. I have seen TRUE game players get scores of 5 or even 6 after ONLY a few hours of play.

I am so glad that everybody is so concerned about clipboard support these days. In fact, thanks to your many insightful, polite, and unbiased clipboard articles, one of your fellow USENETers has requested more clipboard support in BLAZEMONGER* You know, the usual stuff: cutting out levels from another game and importing them into BLAZEMONGER, pasting in pages from actual books, etc. This is an excellent idea. As I'm sure you know from previous postings, BLAZEMONGER is one of the most friendly, well-behaved, totally Intuition-ized programs in existence. Bang on the hardware? We wouldn't dream of it! After all, good behaviour is more important than speed, right? [Pause.... Spittle begins to drip from the chin....]

HAHAHA! If you believe that stuff, you've been living on the Planet W ears!! BLAZEMONGER goes RIGHT TO THE METAL for EVERYTHING, even during the CODING! Yes, we code DIRECTLY in BINARY for MAXIMUM SPEED. Assembly is just TOO SLOW, as you ALL know deep in your HEAR TS. CLIPBOARD SUPPORT?!? What's the purpose of the Clipboard anyway? To transfer data from one application into another, right? Well, the next release of BLAZEMONGER will do even BETTER than that! And FASTER, of course!! Rather than letting you transfer your WIMPY data from another application, BLAZEMONGER comes complete with ALL OF YOUR DATA ALREADY IN IT! Yes, it's true.

Thanks to our Microwave Modem Technology, we already have ALL OF YOUR COMPUTER FILES here on our four million billion gigabyte hard drive. And thanks to our latest data compression techniques, we have encoded All of this data on the BLAZEMONGER disk. If you need any of it, just ask BLAZEMONGER, and it is INSTANTLY inserted into your currently running game!

But," you say, "What about any "new" data I make after I've bought BLAZEMONGER?" This is a legitimate question, so here's a very reasonable answer: FIRST of all, Mr. SMARTY-PANTS, the name of the game is BLAZEMONGER in ALL CAPITAL LETTERS, because you have to YELL when you say it. GET WITH IT, BUDDY!! And second, it's not an issue! You simply can't MAKE any new data after you buy BLAZEMONGER. Once loaded, it's IMPOSSIBLE TO UNLOAD the game. In fact, you can't even turn off your computer because BLAZEMONGER taps directly into the LIVE VOLTAGES in the power supply and conveniently reroutes them into the power switch! This way, you are quickly reminded NEVER to turn off this game. We installed this feature after many of our customers requested it. (Well... actually, they requested hard drive installation, but we decided that this is more efficient.) I hope that answers any questions about BLAZEMONGER's Clipboard support. If you have any other comments, just put them in a file on one of your disks. We'll read them eventually....



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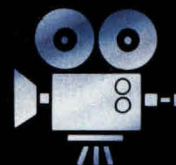
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